Clow #32 Document

clow

Ohio EPA Electronic Submittal Receipt Verification/Certification
Regarding Content of the Electronically Transmitted Fee Emission Report
and Emission Inventory

Clow Water Systems Company
Ohio EPA, DAPC Facility ID: 0616010006
Control Number : 0000018379

Date and Time of Export: 4/15/2004 at 02:49 PM

Reporting Period: 2003

Signature for Statement:

This statement shall be signed by the responsible party or the duly authorized representative of the party.

In the case of:
a) Corporation - by a principal executive officer of at least the level of vice-president, or a duly authorized representative for the facility from which the emissions originate.
b) Partnership - by a general partner.
c) Sole proprietorship - by the proprietor.
d) Municipal, state, federal, or other government facility - by the principal executive officer, the ranking elected official, or duly authorized employee.

Making of any false material statement, representation or certification constitutes a violation of ORC 3704.05(H), and subjects the responsible party signing this statement to civil and/or criminal penalties as provided in ORC 3704.06(C) and ORC 3704.99(B).

I, being the owner or operator of a source subject to OAC Chapter 3745-78 and OAC Chapter 3745-15-03, or person authorized by the owner or operator to sign, hereby affirm that the information contained within the Emission Fee and Emission Inventory Report, which was electronically transmitted to Ohio EPA and identifed by the control number above, is true and complete to the best of my knowledge for each of the air emission reports (sources) described within the Emission Fee and Emission Inventory Report and that all estimates and judgements relating to such information have been made in good faith:

There were a total of 20 emissions units/groups in this submittal.

Sum, in tons/yr, the emissions from all the air emissions units/groups

** Total Particulate Matter (PM):	101.02
PM <= 10 Microns (PM10):	91.59
PM <= 2.5 Microns (PM2.5):	88.74
** Organic Compound (OC):	142.14
Volatile Organic Compounds (VOC)	141.28
** Sulfur Dioxide (SO2):	4.94
** Nitrogen Oxides (NOx)	52.07
** Lead (Pb):	0.03
Carbon Monoxide (CO) :	69.59
Ammonia (NH3) :	0.50

** These pollutants comprise the billable tons per year under OAC Chapter 3745-78

Authorized Signature Joseph Carter Title PLANT MANAGER
Name (Please Print) JOSEPH CARTER Date 4/15/04
Send to: Ohio EPA, DAPC, PIDM, P.O. Box 1049, Columbus, OH 43216-1049

CLOW WATER SYSTEMS COMPANY
Coshocton, OH
2003 FER
Emission Calculations

PROCESS	Emissions Estimates - Regulated Air Pollutants							Reportable? (Y/N)
	Tons/Year							
	PM	SOx	NOx	VOC	CO	PM10	Lead	
Charge Handling (F017)	5.55					5.55		Reportable
Cupola (P901)	19.04	4.76	36.49	21.42	40.45	14.79	0.03	Reportable
Desulfurization & Inoculation (F004)	0.99			0.40		0.99		Reportable
Hot Blast (P033)	0.34	0.03	4.42	0.24	3.71	0.34	0.0000	Reportable
Shell Core Machines - Pipe (Z016)	0.15			5.53		0.15		Reportable
Centrifugal Casting (F018)	9.03			10.54		9.03		Reportable
Annealing Oven (P020)	0.85	0.07	11.12	0.61	9.34	0.85	0.0001	Reportable
Abrasive Wheel Cut-off Saw (P025)	0.89					0.89		Not Reportable
Pipe Paint Operation (K006)	0.20			23.45		0.20		Reportable
Jolt - Pouring & Cooling (F009)	1.33	0.04	0.02	0.42	6.20	1.33	0.001	Reportable
Jolt - Shakeout (F007)	0.02			2.49	2.08	0.01	0.000	Reportable
Jolt Sand System (P007)	0.12					0.02		Reportable
BMM Pouring & Cooling (F010)	0.01	0.04	0.02	0.39	5.85	0.01	0.001	Reportable
BMM Shakeout (F016)	0.02			2.35	1.96	0.01	0.000	Reportable
BMM Sand System (F002/F006)	0.37					0.06		Reportable
Main Floor Mixer (F005)	0.13			2.02		0.13		Reportable
Main Floor - Pouring & Cooling (F008)								Not Reportable
Main Floor - Shakeout								Not Reportable
Foundry Shotblast (F015)	0.01					0.00		Reportable
Fitting Grinding (F011)	1.43					0.00		Reportable
Fittings Painting (K002)	0.30			5.47		0.30		Reportable
Shell Coremaking Machines - Fittings (Z016)	0.00			0.03		0.00		Not Reportable
PUNB Coremaking (F005)	0.13			2.09		0.13		Reportable
Isocure Laempe Coremaking (F014)	0.06			0.45		0.06		Reportable
900.B1	0.00					0.00		Not Reportable
K007 - Core Wash				14.60				Reportable
Roadways and Parking Areas (F019)	0.40					0.40		Not Reportable
Solid Waste Bunker (F020)	0.74					0.74		Not Reportable
BH 250.C3	8.03					8.03		Reportable
BH 250.E5	0.05					0.05		Not Reportable
BH 250.E4	25.34					25.34		Reportable
BH 250.E6	2.03					2.03		Reportable
BH 250.E8	0.04					0.04		Not Reportable
BH 250.E9	0.39					0.39		Not Reportable
BH 250.F3	25.32					25.32		Reportable
Totals	103.31	4.93	52.07	92.50	69.59	97.19	0.03	

CLOW WATER SYSTEMS COMPANY
Coshocton, OH
Annual FER/EIS Reporting

Flow Diagram Designation

Charge Handling (F017)

Actual Usage

Tons/hour

158,643 TPY

Process Description:

Charge Handling (F017)

Control Device: None

Control Device outlet grain loading (PM/PM-10): N/A gr/dscf

Settling Factor (inside) PM/PM-10 %

Facility Process Name:		**Criteria Pollutants**							
	Charge Handling (F017)								
Emission Factor Basis:		**PM**	**SOx**	**NOx**	**VOC**	**CO**	**PM10**	**Lead**	Units
	lb/ton metal charged								
Emission Factors:		0.07					0.07		lb/ton
(source)		Note 1					Note 2		
Capture Efficiencies:									%
Stack Emission Rate:									
	Annual (TPY)								
Fugitive Emission Rate:									
	Annual (TPY)	**5.55**					**5.55**		

Note 1: "An Inventory of Iron Foundry Emissions" by Bernard S. Gutow

Note 2: All PM is assumed to be PM10.

SAMPLE CALCULATIONS:

Fugitive Emission Rate (TPY) = (Actual Usage (TPY) x (Emission Factor (lb/ton)) x (1-(Capture Efficiency/100)) / (2000 lb/ton)

ActualOperating Schedule

9 hours/day

2300 hours/year

Flow Diagram Designation

Hot Blast (P033)

Process Description:
Hot Blast (P033)

Control Device: N/A

Natural Gas Combustion
PSD Regulated and HAP Emissions Estimates

Inputs
88,358.0 = actual fuel usage (MMCF/Yr)

POLLUTANT	CAS #	Emission Factor (lb/10^6 scf) *	Emissions (tpy)
PM / PM10 / PM2.5	n/a	7.6	0.34
NOx	n/a	100	4.42
CO	n/a	84	3.71
Lead	n/a	0.0005	0.0000
SO2	n/a	0.6	0.03
VOC	n/a	5.5	0.24
OC	n/a	11	0.49
NH3	n/a	3.2	0.14
Arsenic	7440-38-2	2.00E-05	8.84E-07
Beryllium	7440-41-7	1.20E-05	5.30E-07
Cadmium	7440-43-9	1.10E-03	4.86E-05
Chromium	7440-47-3	1.40E-03	6.19E-05
Cobalt	7440-48-4	8.40E-05	3.71E-06
Manganese	7439-96-5	3.80E-04	1.68E-05
Mercury	7439-97-6	2.60E-04	1.15E-05
Nickel	7440-02-0	2.10E-03	9.28E-05
Selenium	7782-49-2	2.40E-05	1.06E-06
POM/2-Methylnaphthalene	91-57-6	2.40E-05	1.06E-06
POM/3-Methylchloranthrene	56-49-5	1.80E-06	7.95E-08
POM/7,12-Dimethylbenz(a)anthracene		1.60E-06	7.07E-08
POM/Acenaphthene	83-32-9	1.80E-06	7.95E-08
POM/Acenaphthylene	203-96-8	1.80E-06	7.95E-08
POM/Anthracene	120-12-7	2.40E-06	1.06E-07
POM/Benz(a)anthracene	56-55-3	1.80E-06	7.95E-08
Benzene	71-42-2	2.10E-03	9.28E-05
POM/Benzo(a)pyrene	205-99-2	1.20E-06	5.30E-08
POM/Benzo(b)fluoranthene	205-99-2	1.80E-06	7.95E-08
POM/Benzo(g,h,i)perylene	191-24-2	1.20E-06	5.30E-08
POM/Benzo(k)fluoranthene	205-82-3	1.80E-06	7.95E-08
POM/Chrysene	218-01-9	1.80E-06	7.95E-08
POM/Dibenzo(a,h)anthracene	53-70-3	1.20E-06	5.30E-08
Dichlorobenzene	25321-22-6	1.20E-03	5.30E-05
POM/Fluoranthene	206-44-0	3.00E-06	1.33E-07
POM/Fluorene	86-73-7	2.80E-06	1.24E-07
Formaldehyde	50-00-0	7.50E-02	3.31E-03
Hexane	110-54-3	1.80E+00	7.95E-02
POM/Indeno(1,2,3-cd)pyrene	193-39-5	1.80E-06	7.95E-08
Naphthalene	91-20-3	6.10E-04	2.69E-05
POM/Phenanathrene	85-01-8	1.70E-05	7.51E-07
POM/Pyrene	129-00-0	5.00E-06	2.21E-07
Toluene	108-88-3	3.40E-03	1.50E-04
Total POM			#REF!
Total HAPs			0.08

* FROM AP-42 Fifth Edition, Supplement D, TABLE 1.4-3&4. EMISSION FACTORS FOR METALS FROM NATURAL GAS COMBUSTION; 7/98 External Combustion Sources 1.4-9. Many emission factors were < than a specific value. The number of the specific value was used to error on the conservative side.

CLOW WATER SYSTEMS COMPANY
Coshocton, OH
Annual FER/EIS Reporting

Flow Diagram Designation
Cupola (P901)

Actual Usage
Tons/hour
158,643 TPY

Process Description:

Cupola (P901)
Control Device: Afterburner & Scrubber

Control Device outlet grain loading (PM/PM-10): gr/dscf
Air Flow: dscf
Settling Factor (inside) PM/PM-10 %

Facility Process Name:		Criteria Pollutants							
Cupola (P901)									
Emission Factor Basis:		**PM**	**SOx**	**NOx**	**VOC**	**CO**	**PM10**	**Lead**	Units
lb/ton metal charged									
Emission Factors:		0.240	0.06	0.46	0.27	0.51	0.186	0.0004	lb/ton
(source)		Note 1	Note 2	Note 3	Note 4	Note 5	Note 6	Note 7	
Capture Efficiencies:		99.90	99.90	99.90	99.90	99.90	99.90	99.50	%
Stack Emission Rate:									
Annual (TPY)		**19.02**	**4.75**	**36.45**	**21.40**	**40.41**	**14.78**	**0.03**	TPY
Fugitive Emission Rate:									
Annual (TPY)		**0.02**	**0.00**	**0.04**	**0.02**	**0.04**	**0.01**	**0.00**	TPY

Actual Operating Schedule
2300 Hr/Yr
9 Hr/Day

Note 1: Clow 1998 Cupola Stack Test plus 100% safety factor
Note 2: Emissions Factor represents Atlantic States baghouse for safety factor purposes.
Note 3: Atlantic States Stack Test (February 1990), Run 1, at 45 tph melt rate.
Note 4: Stack Testing Performed by United States Pipe & Foundry Company (Burlington, NJ Site) (August 1991), Method 25A as propane
Note 5: Atlantic States Stack Test (December 1999), Average Emission Factor + 70% safety factor.
Note 6: AP-42 Table 12.10-9 (77.7% of particulate is less than 10 microns).
Note 7: Stack Testing Performed by United States Pipe & Foundry Company (Burlington, NJ Site) (August 1991) + 50% safety factor.

SAMPLE CALCULATIONS:
Stack Emission Rate (TPY) = (Actual Usage (TPY)) x (Emission Factor (lb/ton)) x (Capture Efficiency/100) / (2000 lb/ton)
Fugitive Emission Rate (TPY) = (Actual Usage (TPY) x (Emission Factor (lb/ton)) x (1-(Capture Efficiency/100)) / (2000 lb/ton)

CLOW WATER SYSTEMS COMPANY
Coshocton, OH
Annual FER/EIS Reporting

Flow Diagram Designation: **Desulfurization & Inoculation (F004)**

Actual Usage: Tons/hour

158,643 TPY

Process Description:

Desulfurization & Inoculation (F004)

Control Device:	Baghouse	
Control Device outlet grain loading (PM/PM-10):	See 250.F3	gr/dscf
Air Flow:	See 250.F3	acfm
Settling Factor (inside) PM/PM-10		%

Facility Process Name:		**Criteria Pollutants**							
	Desulfurization & Inoculation (F004)								
Emission Factor Basis:		**PM**	**SOx**	**NOx**	**VOC**	**CO**	**PM10**	**Lead**	Units
lb/ton metal charged									
Emission Factors:		1.25			0.005		1.25		lb/ton
(source)		Note 1			Note 2		Note 1		
									%
Capture Efficiencies:		99%			99%		99%		%
Stack Emission Rate:		See 250.F3					See 250.F3		
	Annual (TPY)				**0.39**				TPY
Fugitive Emission Rate:									
	Annual (TPY)	**0.99**			**0.00**		**0.99**		TPY

Note 1: McWane Study 1994.

Note 2: Emission factor from FIRE 6.24 SCC 3-04-003-10

SAMPLE CALCULATIONS:

Stack Emission Rate (TPY) = (Actual Usage (TPY)) x (Emission Factor (lb/ton)) x (Capture Efficiency/100) / (2000 lb/ton)

Fugitive Emission Rate (TPY) = (Actual Usage (TPY) x (Emission Factor (lb/ton)) x (1-(Capture Efficiency/100)) / (2000 lb/ton)

CLOW WATER SYSTEMS COMPANY
Coshocton, OH
Annual FER/EIS Reporting

Flow Diagram Designation
Shell Core Machines - Pipe (Z016)

Actual Usage
Tons/hour
2,908 TPY

Process Description:

Shell Core Machines - Pipe (Z016)
Control Device: None

Settling Factor (inside) PM/PM-10 70 %

Facility Process Name:		Criteria Pollutants							
	Shell Core Machines - Pipe (Z016)								
Emission Factor Basis:		PM	SOx	NOx	VOC	CO	PM10	Lead	Units
	lb/ton sand processed								
Emission Factors:		0.35					0.35		lb/ton
(source)		Note 1					Note 1		
Capture Efficiencies:									%
Stack Emission Rate:									
	Annual (TPY)								TPY
Fugitive Emission Rate:									
	Annual (TPY)	**0.15**					**0.15**		TPY

Note 1: Ohio RACM Guide, Page 2-219, Table 2.7-1, Emission Factor #15 gives uncontrolled emission factors of 0.3 lb/ton of sand mixed for mixing and 0.35 lb/ton of cores made from making the cores. No mixing will be conducted, the shell sand will be input directly into the machines. Therefore an emission factor of 0.35 lb/ton of cores made will be utilized.

SAMPLE CALCULATIONS:
Fugitive Emission Rate (lb/hr) = ((1 - Capture Efficiency/100) x (Emission Factor) x (actual usage ton/hr) x (1-(Settling Factor)/100)
Fugitive Emission Rate (TPY) = ((1 - Capture Efficiency/100) x (Emission Factor) x (actual usage TPY) x (1-(Settling Factor)/100) / (2000 lb/ton)

CLOW WATER SYSTEMS COMPANY
Coshocton, OH
Annual FER/EIS Reporting

VOC & HAP Emission Estimates from Pipe Foundry Shell CoreMaking

= Actual Usage (Tons/hr)

2,908 =Actual Usage (Tons/yr)

VOCs & HAP's

	CAS #	% by Weight	Basis	Emissions	
				lb/hr	tons/yr
Total VOCs		0.19%	Discussions w/Borden rep. Regarding Super F E19E19 MSDS		5.53
Powder Phenolic Resin					
Formaldehyde	50-00-0	0.02%	Discussions w/Borden rep. Regarding Super F E19E19 MSDS		0.58
Phenol	108-95-2	0.08%	Discussions w/Borden rep. Regarding Super F E19E19 MSDS		2.33
				Total HAPS	2.91

SAMPLE CALCULATIONS:

Emission Rate (lb/hr) =(Actual Usage(T/Hr)) x (weight percent) x (2000 lb/ton)

Emission Rate (TPY) =(Actual Usage (TPY)) x (weight percent)

CLOW WATER SYSTEMS COMPANY
Coshocton, OH
Annual FER/EIS Reporting

Flow Diagram Designation: **Centrifugal Casting (F018)**

Actual Usage: 150,583 Tons/hour TPY

Process Description:

Centrifugal Casting (F018)

Control Device:	None	
Control Device outlet grain loading (PM/PM-10):	N/A	gr/dscf
Air Flow:	N/A	acfm
Settling Factor (inside) PM/PM-10		%

Facility Process Name:	**Criteria Pollutants**							
Centrifugal Casting (F018)								
Emission Factor Basis:	**PM**	**SOx**	**NOx**	**VOC**	**CO**	**PM10**	**Lead**	Units
lb/ton metal charged								
Emission Factors:	0.12			0.140		0.12		lb/ton
(source)	Note 1			Note 1		Note 1		
								%
Capture Efficiencies:								%
Stack Emission Rate:								
Annual (TPY)								TPY
Fugitive Emission Rate:								
Annual (TPY)	**9.03**			**10.54**		**9.03**		TPY

Note 1: McKinley, "Air Emissions from Permanent Mold Casting of Ductile Iron Pipe", 1994

SAMPLE CALCULATIONS:

Stack Emission Rate (TPY) = (Actual Usage (TPY)) x (Emission Factor (lb/ton)) x (Capture Efficiency/100) / (2000 lb/ton)

Fugitive Emission Rate (TPY) = (Actual Usage (TPY) x (Emission Factor (lb/ton)) x (1-(Capture Efficiency/100)) / (2000 lb/ton)

CLOW WATER SYSTEMS COMPANY
Coshocton, OH
Annual FER/EIS Reporting

Flow Diagram Designation
Annealing Oven (P020)

Process Description:
Annealing Oven (P020)

Control Device: N/A

Natural Gas Combustion
PSD Regulated and HAP Emissions Estimates

Inputs	
94.96	= Max.hourly heat input Rate (MMBTU/hr)
1000	=Fuel heat content (Btu/ft3)
94,960	= Max.hourly Fuel Usage rate (standard cubic feet hour)
222,454	= actual fuel usage (MMBtu/Yr)

POLLUTANT	CAS #	Emission Factor (lb/10^6 scf) *	Emissions (lbs/hr)	Emissions (tpy)
PM / PM10 / PM2.5	n/a	7.6	0.72	0.85
NOx	n/a	100	9.50	11.12
CO	n/a	84	7.98	9.34
Lead	n/a	0.0005	0.00005	0.0001
SO2	n/a	0.6	0.057	0.07
VOC	n/a	5.5	0.52	0.61
OC	n/a	11	1.04	1.22
NH3	n/a	3.2	0.30	0.36
Arsenic	7440-38-2	2.00E-05	1.90E-06	2.22E-06
Beryllium	7440-41-7	1.20E-05	1.14E-06	1.33E-06
Cadmium	7440-43-9	1.10E-03	1.04E-04	1.22E-04
Chromium	7440-47-3	1.40E-03	1.33E-04	1.56E-04
Cobalt	7440-48-4	8.40E-05	7.98E-06	9.34E-06
Manganese	7439-96-5	3.80E-04	3.61E-05	4.23E-05
Mercury	7439-97-6	2.60E-04	2.47E-05	2.89E-05
Nickel	7440-02-0	2.10E-03	1.99E-04	2.34E-04
Selenium	7782-49-2	2.40E-05	2.28E-06	2.67E-06
POM/2-Methylnaphthalene	91-57-6	2.40E-05	2.28E-06	2.67E-06
POM/3-Methylchloranthrene	56-49-5	1.80E-06	1.71E-07	2.00E-07
POM/7,12-Dimethylbenz(a)anthracene		1.60E-06	1.52E-07	1.78E-07
POM/Acenaphthene	83-32-9	1.80E-06	1.71E-07	2.00E-07
POM/Acenaphthylene	203-96-8	1.80E-06	1.71E-07	2.00E-07
POM/Anthracene	120-12-7	2.40E-06	2.28E-07	2.67E-07
POM/Benz(a)anthracene	56-55-3	1.80E-06	1.71E-07	2.00E-07
Benzene	71-42-2	2.10E-03	1.99E-04	2.34E-04
POM/Benzo(a)pyrene	205-99-2	1.20E-06	1.14E-07	1.33E-07
POM/Benzo(b)fluoranthene	205-99-2	1.80E-06	1.71E-07	2.00E-07
POM/Benzo(g,h,i)perylene	191-24-2	1.20E-06	1.14E-07	1.33E-07
POM/Benzo(k)fluoranthene	205-82-3	1.80E-06	1.71E-07	2.00E-07
POM/Chrysene	218-01-9	1.80E-06	1.71E-07	2.00E-07
POM/Dibenzo(a,h)anthracene	53-70-3	1.20E-06	1.14E-07	1.33E-07
Dichlorobenzene	25321-22-6	1.20E-03	1.14E-04	1.33E-04
POM/Fluoranthene	206-44-0	3.00E-06	2.85E-07	3.34E-07
POM/Fluorene	86-73-7	2.80E-06	2.66E-07	3.11E-07
Formaldehyde	50-00-0	7.50E-02	7.12E-03	8.34E-03
Hexane	110-54-3	1.80E+00	1.71E-01	2.00E-01
POM/Indeno(1,2,3-cd)pyrene	193-39-5	1.80E-06	1.71E-07	2.00E-07
Naphthalene	91-20-3	6.10E-04	5.79E-05	6.78E-05
POM/Phenanathrene	85-01-8	1.70E-05	1.61E-06	1.89E-06
POM/Pyrene	129-00-0	5.00E-06	4.75E-07	5.56E-07
Toluene	108-88-3	3.40E-03	3.23E-04	3.78E-04
Total POM			7.01E-06	7.79E-04
Total HAPs				0.21

* FROM AP-42 Fifth Edition, Supplement D, TABLE 1.4-3&4. EMISSION FACTORS FOR METALS FROM NATURAL GAS COMBUSTION: 7/98 External Combustion Sources 1.4-9. Many emission factors were < than a specific value. The number of the specific value was used to error on the conservative side.

CLOW WATER SYSTEMS COMPANY
Coshocton, OH
Annual FER/EIS Reporting

Flow Diagram Designation: **Abrasive Wheel Cut-off Saw (P025)**

Actual Usage: Tons/hour

3,543 TPY

Process Description:

Abrasive Wheel Cut-off Saw (P025)

Control Device:	None	
Control Device outlet grain loading (PM/PM-10):	N/A	gr/dscf
Air Flow:	N/A	acfm
Settling Factor (inside) PM/PM-10	70	%

Facility Process Name:	**Criteria Pollutants**							
Abrasive Wheel Cut-off Saw (P025)								
Emission Factor Basis:	**PM**	**SOx**	**NOx**	**VOC**	**CO**	**PM10**	**Lead**	Units
lb/ton metal charged								
Emission Factors:	1.67					1.67		lb/ton
(source)	Note 1					Note 2		
								%
Capture Efficiencies:								%
Stack Emission Rate:								
Annual (TPY)								TPY
Fugitive Emission Rate:								
Annual (TPY)	**0.89**					**0.89**		TPY

Note 1: Emission factor from DIPRA emission manual. Average for all pipe sizes used.

Note 2: All PM assumed to be PM10.

SAMPLE CALCULATIONS:

Stack Emission Rate (TPY) = (Actual Usage (TPY)) x (Emission Factor (lb/ton)) x (Capture Efficiency/100) / (2000 lb/ton)

Fugitive Emission Rate (TPY) = (Actual Usage (TPY) x (Emission Factor (lb/ton)) x (1-(Capture Efficiency/100)) / (2000 lb/ton)

Actual Operating Schedule

2300 hours/year

CLOW WATER SYSTEMS COMPANY
Coshocton, OH
Annual FER/EIS Reporting

Flow Diagram Designation		Actual Usage	
Pipe Paint Operation (K006)	Asphaltic Coating	77,569	Gal/yr
			Gal/hr
	Solvent	7,329	Gal/yr
Process Description:			Gal/hr

Pipe Paint Operation (K006)		
Control Device:	N/A	
Control Device outlet grain loading (PM/PM-10):	N/A	gr/dscf
Air Flow:	N/A	acfm
Settling Factor (inside) PM/PM-10	N/A	%

Actual Emissions

Coating Description	Solids (lb/gal)	VOC Content (lb/gal)	Transfer Efficiency[1]	Booth Capture Efficiency	Filter Control Efficiency	PM/PM_{10} Emissions (TPY)	VOC Emissions (TPY)
Asphaltic Coating	4.0375	0.00	75%	100%	99.5%	0.20	0.00
Mineral Spirits	0.00	6.40	N/A	N/A	N/A	0.00	23.45

[1] Per Spray Gun Manufacturer's data.

SAMPLE CALCULATIONS:

VOC Emission Rate (TPY) = (Actual Coating/Solvent Usage (Gal./Yr) x (VOC Content (lb/gal)) / (2000 lb/ton)

PM Emission Rate (TPY) = (Actual Coating/Solvent Usage (Gal./Yr)) x (Solids Content (lb/gal)) x (1-(Transfer Efficiency/100)) x (Capture Efficiency/100) x (1- (Control Efficiency/100)) / (2000 lb/ton)

CLOW WATER SYSTEMS COMPANY
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Flow Diagram Designation: **Jolt - Pouring & Cooling (F009)**

Actual Usage: Tons/hour — 4,150 TPY

Process Description:

Jolt - Pouring & Cooling (F009)

Control Device:	None	
Control Device outlet grain loading (PM/PM-10):	n/a	gr/dscf
Air Flow:	n/a	acfm
Settling Factor (inside) PM/PM-10		%

Facility Process Name:		**Criteria Pollutants**							
	Jolt - Pouring & Cooling (F009)								
Emission Factor Basis:		**PM**	**SOx**	**NOx**	**VOC**	**CO**	**PM10**	**Lead**	Units
	lb/ton metal poured								
Emission Factors:		0.64	0.02	0.01	0.20	2.99	0.64	0.00048	lb/ton
(source)		Note 1	Note 2	Note 2	Note 3	Note 4	Note 1	Note 5	
Capture Efficiencies:									%
Stack Emission Rate:									
	Annual (TPY)								TPY
Fugitive Emission Rate:									
	Annual (TPY)	**1.33**	**0.04**	**0.02**	**0.42**	**6.20**	**1.33**	**0.0010**	TPY

Note 1: Stack test at Quality Castings, Orrville, OH.
Note 2: FIRE 6.24 SCC 3-04-003-20
Note 3: Wheeland Foundry Stack Test
Note 4: GM Saginaw, MI permit
Note 5: CERP Stack Testing Foundry in Mexico

Comments:

SAMPLE CALCULATIONS:
Stack Emission Rate (TPY) = (Actual Usage (TPY)) x (Emission Factor (lb/ton)) x (Capture Efficiency/100) / (2000 lb/ton)
Fugitive Emission Rate (TPY) = (Actual Usage (TPY) x (Emission Factor (lb/ton)) x (1-(Capture Efficiency/100)) / (2000 lb/ton)

Actual Operating Schedule
8 hours/day
2023 hours/year

CLOW WATER SYSTEMS COMPANY
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Flow Diagram Designation: **Jolt - Shakeout (F007)**

Actual Usage: Tons/hour; 4,150 TPY

Process Description:

Jolt - Shakeout (F007)

Control Device:	Baghouse	
Control Device outlet grain loading (PM/PM-10):	See 250.F3	gr/dscf
Air Flow:	See 250.F3	acfm
Settling Factor (inside) PM/PM-10	70 %	

Facility Process Name:	**Criteria Pollutants**							
Jolt - Shakeout (F007)								
Emission Factor Basis:	**PM**	**SOx**	**NOx**	**VOC**	**CO**	**PM10**	**Lead**	Units
lb/ton metal poured								
Emission Factors:	3.20			1.20	1.00	2.24	0.00013	lb/ton
(source)	Note 1			Note 1	Note 2	Note 1	Note 3	
Capture Efficiencies:	99			99	99	99	99	%
Stack Emission Rate:								
Annual (TPY)	**See 250.F3**			**2.47**	**2.05**	**See 250.F3**	**0.0003**	TPY
Fugitive Emission Rate:								
Annual (TPY)	**0.02**			**0.02**	**0.02**	**0.01**	**0.0000**	TPY

Note 1: Emission factor from FIRE 6.24 SCC 3-04-003-31

Note 2: Waupaca foundry RBLC determination in Indiana.

Note 3: Factor from "Foundry Process Emission Factors: Baseline Emissions from Automotive Foundries in Mexico".

SAMPLE CALCULATIONS:

Stack Emission Rate (TPY) = (Actual Usage (TPY)) x (Emission Factor (lb/ton)) x (Capture Efficiency/100) / (2000 lb/ton)

Fugitive Emission Rate (TPY) = (Actual Capacity (TPY) x (Emission Factor (lb/ton)) x (1-(Capture Efficiency/100)) / (2000 lb/ton)

Actual Operating Schedule

8 hours/day

2023 hours/year

CLOW WATER SYSTEMS COMPANY
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Flow Diagram Designation

Jolt Sand System (P007)

Annual Sand processing

Actual Usage

Tons/hour

43,137 Tons/year

Process Description:

Jolt Sand System (P007)

Control Device: Baghouse

Control Device outlet grain loading (PM/PM-10): see 250.F3 gr/dscf

Air Flow: see 250.F3 acfm

Settling Factor (inside) PM/PM-10 70 %

Facility Process Name:		**Criteria Pollutants**							
	Jolt Sand System (P007)								
Emission Factor Basis:		**PM**	**SOx**	**NOx**	**VOC**	**CO**	**PM10**	**Lead**	Units
	lb/ton sand processed								
Emission Factors:		3.60					0.54		lb/ton
(source)		Note 1					Note 1		
Capture Efficiencies:		99.50					99.50		%
Stack Emission Rate:		see 250.F3					see 250.F3		
	Annual (TPY)								TPY
Fugitive Emission Rate:									
	Annual (TPY)	**0.12**					**0.02**		TPY

Note 1: Emission factor from FIRE 6.24 SCC 3-04-003-50

SAMPLE CALCULATIONS:

Fugitive Emission Rate (TPY) = (Actual Usage (TPY) x (Emission Factor (lb/ton)) x (1-(Capture Efficiency/100)) / (2000 lb/ton)

Actual Operating Schedule

8 hours/day

2023 hours/year

CLOW WATER SYSTEMS COMPANY
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Flow Diagram Designation: **BMM Pouring & Cooling (F010)**

Actual Usage: Tons/hour — 3,910 TPY

Process Description:

BMM Pouring & Cooling (F010)

Control Device:	Baghouse	
Control Device outlet grain loading (PM/PM-10):	see BH250.F4	gr/dscf
Air Flow:	see BH250.F4	acfm
Settling Factor (inside) PM/PM-10		%

Facility Process Name:	**Criteria Pollutants**							
BMM Pouring & Cooling (F010)								
Emission Factor Basis:	**PM**	**SOx**	**NOx**	**VOC**	**CO**	**PM10**	**Lead**	Units
lb/ton metal poured								
Emission Factors:	0.64	0.02	0.01	0.20	2.99	0.64	0.00048	lb/ton
(source)	Note 1	Note 2	Note 2	Note 3	Note 4	Note 1	Note 5	
Capture Efficiencies:	99	99	99	99	99	99	99	%
Stack Emission Rate:	See BH 250.F4					See BH 250.F4		
Annual (TPY)		**0.04**	**0.02**	**0.39**	**5.79**		**0.0009**	TPY
Fugitive Emission Rate:								
Annual (TPY)	**0.01**	**0.00**	**0.00**	**0.00**	**0.06**	**0.01**	**0.0000**	TPY

Note 1: Stack test at Quality Castings, Orrville, OH.
Note 2: FIRE 6.24 SCC 3-04-003-20
Note 3: Wheeland Foundry Stack Test
Note 4: GM Saginaw, MI permit
Note 5: CERP Stack Testing Foundry in Mexico

Comments:

SAMPLE CALCULATIONS:
Stack Emission Rate (TPY) = (Actual Usage (TPY)) x (Emission Factor (lb/ton)) x (Capture Efficiency/100) / (2000 lb/ton)
Fugitive Emission Rate (TPY) = (Actual Usage (TPY) x (Emission Factor (lb/ton)) x (1-(Capture Efficiency/100)) / (2000 lb/ton)

Actual Operating Schedule
8 hours/day
2023 hours/year

CLOW WATER SYSTEMS COMPANY
Coshocton, OH
Annual FER/EIS Reporting

Flow Diagram Designation
BMM Shakeout (F016)

Actual Usage
Tons/hour
3,910 TPY

Process Description:

BMM Shakeout (F016)
Control Device: Baghouse
Control Device outlet grain loading (PM/PM-10): See 250.F4 gr/dscf
Air Flow: See 250.F4 acfm
Settling Factor (inside) PM/PM-10 70 %

Facility Process Name:	Criteria Pollutants							
BMM Shakeout (F016)								
Emission Factor Basis:	**PM**	**SOx**	**NOx**	**VOC**	**CO**	**PM10**	**Lead**	Units
lb/ton metal poured								
Emission Factors:	3.20			1.20	1.00	2.24	0.00013	lb/ton
(source)	Note 1			Note 1	Note 2	Note 1	Note 3	
Capture Efficiencies:	99			99	99	99	99	%
Stack Emission Rate:	See 250.F4					See 250.F4		
Annual (TPY)				**2.32**	**1.94**		**0.0002**	TPY
Fugitive Emission Rate:								
Annual (TPY)	**0.02**			**0.02**	**0.02**	**0.01**	**0.0000**	TPY

Note 1: Emission factor from FIRE 6.24 SCC 3-04-003-31
Note 2: Waupaca foundry RBLC determination in Indiana.
Note 3: Factor from "Foundry Process Emission Factors: Baseline Emissions from Automotive Foundries in Mexico".

SAMPLE CALCULATIONS:
Stack Emission Rate (TPY) = (Actual Usage (TPY)) x (Emission Factor (lb/ton)) x (Capture Efficiency/100) / (2000 lb/ton)
Fugitive Emission Rate (TPY) = (Actual Usage (TPY) x (Emission Factor (lb/ton)) x (1-(Capture Efficiency/100)) / (2000 lb/ton)

Actual Operating Schedule
8 hours/day
2023 hours/year

CLOW WATER SYSTEMS COMPANY
Coshocton, OH
Annual FER/EIS Reporting

Flow Diagram Designation — Actual Usage

BMM Sand System (F002/F006) — Tons/hour

Annual Sand processing — 69,360 Tons/year

Process Description:

BMM Sand System (F002/F006)

Control Device: Baghouse

Control Device outlet grain loading (PM/PM-10): see 250.F3 gr/dscf

Air Flow: see 250.F3 acfm

Settling Factor (inside) PM/PM-10 70 %

Facility Process Name:	Criteria Pollutants							
BMM Sand System (F002/F006)								
Emission Factor Basis:	**PM**	**SOx**	**NOx**	**VOC**	**CO**	**PM10**	**Lead**	Units
lb/ton sand processed								
Emission Factors:	3.60					0.54		lb/ton
(source)	Note 1					Note 1		
Capture Efficiencies:	99.00					99.00		%
Stack Emission Rate:	see 250.F3					see 250.F3		
Annual (TPY)								TPY
Fugitive Emission Rate:								
Annual (TPY)	**0.37**					**0.06**		TPY

Note 1: Emission factor from FIRE 6.24 SCC 3-04-003-50

SAMPLE CALCULATIONS:

Fugitive Emission Rate (TPY) = (Actual Usage (TPY) x (Emission Factor (lb/ton)) x (1-(Capture Efficiency/100)) / (2000 lb/ton)

Actual Operating Schedule

8 hours/day

2023 hours/year

CLOW WATER SYSTEMS COMPANY
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Flow Diagram Designation: **Main Floor Mixer (F005)**

Actual Usage: Tons/hour — 2,814 TPY

Process Description:

Main Floor Mixer (F005)

Ventilation Rate	N/A	acfm	
Control Device:	N/A	gr/acfm	Baghouse

Settling Factor (inside) PM/PM-10 70 %

Facility Process Name:		**Criteria Pollutants**							
	Ventilation Rate								
Emission Factor Basis:		**PM**	**SOx**	**NOx**	**VOC**	**CO**	**PM10**	**Lead**	Units
	lb/ton sand processed								
Emission Factors:		0.30					0.30		lb/ton
(source)		Note 1					Note 1		
Capture Efficiencies:									%
Stack Emission Rate:									
	Annual (TPY)								TPY
Fugitive Emission Rate:									
	Annual (TPY)	**0.13**					**0.13**		TPY

Note 1: Visual observation indicates no emissions from making.

SAMPLE CALCULATIONS:

Fugitive Emission Rate (lb/hr) = ((1 - Capture Efficiency/100) x (Emission Factor) x (Actual Usage ton/hr) x (1-(Settling Factor)/100)

Fugitive Emission Rate (TPY) = ((1 - Capture Efficiency/100) x (Emission Factor) x (Actual Usage TPY) x (1-(Settling Factor)/100) / (2000 lb/ton)

Actual Operating Schedule

8 hours/day

2023 hours/year

CLOW WATER SYSTEMS COMPANY
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VOC AND HAPS FROM MAIN FLOOR MIXER

=Actual Usage (Tons core/hr)
2,814 = Actual Usage (Tons cores/yr)

1.2% % resin usage (of sand)
6% % catalyst uage (of resin)
57.0% % by weight Part I
43.0% % by weight Part II

VOCS AND HAPS	CAS #	% by Weight	Basis	Control Efficiency %	Emission Factor lb/ton	Emissions Factor Basis	Actual Emissions lb/hr	Actual Emissions tons/yr
Total VOCs					1.44	Note 1	7.186	2.02
Part 1								
Part 2								
Catalyst								

* - Indicates compound is a Polycylic Organic Matter (POM)

Note 1: Ashland Data based on OCMA weight loss method (Pepset XI1000/XI2000 with catalyst 3550)

SAMPLE CALCULATIONS:
Emission Rate (lb/hr) = (Emission Factor) x (Actual Usage ton/hr)
Emission Rate (TPY) = (Emission Factor) x (Actual Usage TPY) / (2000 lb/ton)

CLOW WATER SYSTEMS COMPANY
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Flow Diagram Designation: **Main Floor - Pouring & Cooling (F008)**

Actual Usage: - Tons/hour; - TPY

Process Description:

Main Floor - Pouring & Cooling (F008)

Control Device:	None	
Control Device outlet grain loading (PM/PM-10):	n/a	gr/dscf
Air Flow:	n/a	acfm
Settling Factor (inside) PM/PM-10		%

Facility Process Name:		**Criteria Pollutants**							
	Main Floor - Pouring & Cooling (F008)								
Emission Factor Basis:		**PM**	**SOx**	**NOx**	**VOC**	**CO**	**PM10**	**Lead**	Units
	lb/ton metal poured								
Emission Factors:		0.64	0.02	0.01	1.80	2.99	0.64	0.00048	lb/ton
(source)		Note 1	Note 2	Note 2	Note 3	Note 4	Note 1	Note 5	
Capture Efficiencies:									%
Stack Emission Rate:									
	Annual (TPY)								TPY
Fugitive Emission Rate:									
	Annual (TPY)								TPY

Note 1: Stack test at Quality Castings, Orrville, OH.
Note 2: FIRE 6.23 SCC 3-04-003-20
Note 3: CERP Stack Testing Foundry in Mexico. Includes emissions from Main Floor Shakeout.
Note 4: GM Saginaw, Mi permit
Note 5: CERP Stack Testing Foundry in Mexico

Comments:

SAMPLE CALCULATIONS:
Stack Emission Rate (TPY) = (Actual Usage (TPY)) x (Emission Factor (lb/ton)) x (Capture Efficiency/100) / (2000 lb/ton)
Fugitive Emission Rate (TPY) = (Actual Usage (TPY) x (Emission Factor (lb/ton)) x (1-(Capture Efficiency/100)) / (2000 lb/ton)

Actual Operating Schedule
- hours/day
hours/year

CLOW WATER SYSTEMS COMPANY
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Flow Diagram Designation: **Main Floor - Shakeout**

Actual Usage: - Tons/hour; - TPY

Process Description:

Main Floor - Shakeout
Control Device: None
Control Device outlet grain loading (PM/PM-10): gr/dscf
Air Flow: acfm
Settling Factor (inside) PM/PM-10 70 %

Facility Process Name:	Criteria Pollutants							
Main Floor - Shakeout								
Emission Factor Basis:	**PM**	**SOx**	**NOx**	**VOC**	**CO**	**PM10**	**Lead**	Units
lb/ton metal poured								
Emission Factors:	0.30				1.00	0.30	0.00013	lb/ton
(source)	Note 1			Note 4	Note 2	Note 1	Note 3	
Capture Efficiencies:								%
Stack Emission Rate:								
Annual (TPY)								TPY
Fugitive Emission Rate:								
Annual (TPY)								TPY

Note 1: Emission factor from FIRE 6.23 SCC 3-04-003-31
Note 2: Waupaca foundry RBLC determination in Indiana.
Note 3: Factor from "Foundry Process Emission Factors: Baseline Emissions from Automotive Foundries in Mexico".
Note 4: Included with emissions from Main Floor Pouring & Cooling.

SAMPLE CALCULATIONS:
Fugitive Emission Rate (TPY) = (Actual Usage (TPY) x (Emission Factor (lb/ton)) x (1-(Capture Efficiency/100)) / (2000 lb/ton)

Actual Operating Schedule
- hours/day
hours/year

CLOW WATER SYSTEMS COMPANY
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Flow Diagram Designation
Foundry Shotblast (F015)

Actual Usage
Tons/hour
5,959 TPY

Process Description:

Foundry Shotblast (F015)		
Control Device:	Baghouse	
Control Device outlet grain loading (PM/PM-10):	See 250.C3	gr/dscf
Air Flow:	See 250.C3	acfm
Settling Factor (inside) PM/PM-10	70	%

Facility Process Name:	**Criteria Pollutants**							
Foundry Shotblast (F015)								
Emission Factor Basis:	**PM**	**SOx**	**NOx**	**VOC**	**CO**	**PM10**	**Lead**	Units
lb/ton metal poured								
Emission Factors:	15.50					1.70		lb/ton
(source)	Note 1					Note 2		
Capture Efficiencies:	99.90					99.90		%
Stack Emission Rate:	See 250.C3					See 250.C3		
Annual (TPY)								TPY
Fugitive Emission Rate:								
Annual (TPY)	**0.01**					**0.002**		TPY

Note 1: Bernard S. Gutow article

Note 2: Emission factor from FIRE 6.24 SCC 3-04-003-40

SAMPLE CALCULATIONS:

Fugitive Emission Rate (TPY) = (Actual Usage (TPY) x (Emission Factor (lb/ton)) x (1-(Capture Efficiency/100)) / (2000 lb/ton)

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Coshocton, OH
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Flow Diagram Designation
Fitting Grinding (F011)

Actual Usage
Tons/hour
5,959 TPY

Process Description:

Fitting Grinding (F011)
Control Device: None
Control Device outlet grain loading (PM/PM-10): n/a gr/dscf
Air Flow: n/a acfm
Settling Factor (inside) PM/PM-10 70 %

Facility Process Name:	Criteria Pollutants							
Fitting Grinding (F011)								
Emission Factor Basis:	**PM**	**SOx**	**NOx**	**VOC**	**CO**	**PM10**	**Lead**	Units
lb/ton metal poured								
Emission Factors:	1.60					0.0045		lb/ton
(source)	Note 1					Note 2		
Capture Efficiencies:	0.00					0.00		%
Stack Emission Rate:								
Annual (TPY)								TPY
Fugitive Emission Rate:								
Annual (TPY)	**1.43**					**0.0040**		TPY

Note 1: Bernard S. Gutow article.
Note 2: Emission factor from FIRE 6.24 SCC 3-04-003-60

SAMPLE CALCULATIONS:
Fugitive Emission Rate (TPY) = (Actual Usage (TPY) x (Emission Factor (lb/ton)) x (1-(Capture Efficiency/100)) / (2000 lb/ton)

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Flow Diagram Designation

Fittings Painting (K002)

	Actual Usage	
Asphaltic Coating #1	2,990	Gal/yr
Mineral Spirits	129	Gal/yr
Other Coatings	571	Gal/yr

Process Description:

Fittings Painting (K002)		
Control Device:	N/A	
Control Device outlet grain loading (PM/PM-10):	N/A	gr/dscf
Air Flow:	N/A	acfm
Settling Factor (inside) PM/PM-10	N/A	%

Emissions

Coating Description	Solids (lb/gal)	VOC Content (lb/gal)	Transfer Efficiency	Booth Capture Efficiency	Filter Control Efficiency	PM/PM_{10} Emissions (TPY)	VOC Emissions (TPY)
Asphaltic Coating	3.99	3.385	50%	100%	90%	0.30	5.06
Other Coatings	9.97	2.905	50%	100%	90%	0.14	0.83
Mineral Spirits	0.00	6.40	N/A	N/A	N/A	0.00	0.41
					Total	**0.44**	**6.30**

SAMPLE CALCULATIONS:

VOC Emission Rate (TPY) = (Actual Coating/Solvent Usage (Gal./Yr) x (VOC Content (lb/gal)) / (2000 lb/ton)

PM Emission Rate (TPY) = (Actual Coating/Solvent Usage (Gal./Yr)) x (Solids Content (lb/gal)) x (1-(Transfer Efficiency/100)) x (Capture Efficiency/100) x (1- (Control Efficiency/100)) / (2000 lb/ton)

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Flow Diagram Designation

Shell Coremaking Machines - Fittings (Z016)

Actual Usage

Tons/hour

16 TPY

Process Description:

Shell Coremaking Machines - Fittings (Z016)

Control Device: None

Settling Factor (inside) PM/PM-10 70 %

Facility Process Name:	Criteria Pollutants							
Shell Coremaking Machines - Fittings (Z016)								
Emission Factor Basis:	**PM**	**SOx**	**NOx**	**VOC**	**CO**	**PM10**	**Lead**	Units
lb/ton sand processed								
Emission Factors:	0.35					0.35		lb/ton
(source)	Note 1					Note 1		
Capture Efficiencies:								%
Stack Emission Rate:								
Annual (TPY)								TPY
Fugitive Emission Rate:								
Annual (TPY)	**0.00**					**0.00**		TPY

Note 1: Ohio RACM Guide, Page 2-219, Table 2.7-1, Emission Factor #15 gives uncontrolled emission factors of 0.3 lb/ton of sand mixed for mixing and 0.35 lb/ton of cores made from making the cores. No mixing will be conducted, the shell sand will be input directly into the machines. Therefore an emission factor of 0.35 lb/ton of cores made will be utilized.

SAMPLE CALCULATIONS:

Fugitive Emission Rate (lb/hr) = ((1 - Capture Efficiency/100) x (Emission Factor) x (Actual Usage ton/hr) x (1-(Settling Factor)/100)

Fugitive Emission Rate (TPY) = ((1 - Capture Efficiency/100) x (Emission Factor) x (Actual Usage TPY) x (1-(Settling Factor)/100) / (2000 lb/ton)

CLOW WATER SYSTEMS COMPANY
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VOC & HAP Emission Estimates from Shell CoreMaking - Fittings

=Actual Usage (Tons/hr)
16 = Actual Usage (Tons/yr)

VOCs & HAP's

	CAS #	% by Weight	Basis	Emissions	
				lb/hr	tons/yr
Total VOCs		0.19%	Discussions w/Borden rep. Regarding Super F E19E19 MSDS		0.03
Powder Phenolic Resin					
Formaldehyde	50-00-0	0.02%	Discussions w/Borden rep. Regarding Super F E19E19 MSDS		0.00
Phenol	108-95-2	0.08%	Discussions w/Borden rep. Regarding Super F E19E19 MSDS		0.01
				Total HAPS	0.02

SAMPLE CALCULATIONS:
Emission Rate (lb/hr) =(Actual Hourly Production T/Hr) x (Weight percentage) x (2000 lbs/ton)
Emission Rate (TPY) =(Actual Annual Production T/Yr) x (Weight percentage)

CLOW WATER SYSTEMS COMPANY
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Flow Diagram Designation: **PUNB Coremaking (F005)**

Actual Usage: Tons/hour; 2,911 TPY

Process Description:

PUNB Coremaking (F005)

Ventilation Rate	N/A	acfm	
Control Device:	N/A	gr/acfm	Baghouse

Settling Factor (inside) PM/PM-10 70 %

Facility Process Name:		**Criteria Pollutants**							
	Ventilation Rate								
Emission Factor Basis:		**PM**	**SOx**	**NOx**	**VOC**	**CO**	**PM10**	**Lead**	Units
	lb/ton sand processed								
Emission Factors:		0.30					0.30		lb/ton
(source)		Note 1					Note 1		
Capture Efficiencies:									%
Stack Emission Rate:									
	Annual (TPY)								TPY
Fugitive Emission Rate:									
	Annual (TPY)	**0.13**					**0.13**		TPY

Note 1: Visual observation indicates no emissions from making.

SAMPLE CALCULATIONS:

Fugitive Emission Rate (lb/hr) = ((1 - Capture Efficiency/100) x (Emission Factor) x (Actual Usage ton/hr) x (1-(Settling Factor)/100)

Fugitive Emission Rate (TPY) = ((1 - Capture Efficiency/100) x (Emission Factor) x (Actual Usage TPY) x (1-(Settling Factor)/100) / (2000 lb/ton)

CLOW WATER SYSTEMS COMPANY
Coshocton, OH
Annual FER/EIS Reporting

VOC AND HAPS FROM PUNB COREMAKING

=Actual Usage (Tons core/hr)
2,911 = Actual Usage (Tons cores/yr)

1.2 % resin usage (of sand)
6.0 % catalyst usage (of resin)
57.0 % by weight Part I
43.0 % by weight Part II

VOCS AND HAPS

	CAS #	% by Weight	Basis	Control Efficiency %	Emission Factor lb/ton	Emissions Factor Basis	Emissions lb/hr	Emissions tons/yr
Total VOCs					1.44	Note 1		2.09
Part 1								
Part 2								
Catalyst								

* - Indicates compound is a Polycylic Organic Matter (POM)

Note 1: Ashland Data based on OCMA weight loss method (Pepset XI1000/XI2000 with catalyst 3550)

SAMPLE CALCULATIONS:
Emission Rate (lb/hr) = (Emission Factor) x (Actual Usage ton/hr)
Emission Rate (TPY) = (Emission Factor) x (Actual Usage TPY) / (2000 lb/ton)

CLOW WATER SYSTEMS COMPANY
Coshocton, OH
Annual FER/EIS Reporting

Flow Diagram Designation: **Isocure Laempe Coremaking (F014)** (Mixing)

Actual Usage: Tons/hour; 1,324 TPY

Process Description:

Isocure Laempe Coremaking (F014)
Control Device: BH 250.E6

Settling Factor (inside) PM/PM-10 70 %

Facility Process Name:		Criteria Pollutants							
	Isocure Laempe Coremaking (F014)								
Emission Factor Basis:		PM	SOx	NOx	VOC	CO	PM10	Lead	Units
	lb/ton sand processed								
Emission Factors:		0.30					0.30		lb/ton
(source)		Note 1					Note 1		
Capture Efficiencies:									%
Stack Emission Rate:									
	Annual (TPY)	See BH250-E6					See BH250-E6		TPY
Fugitive Emission Rate:									
	Annual (TPY)	0.06					0.06		TPY

Note 1: Ohio RACM Guide, Page 2-219, Table 2.7-1, gives uncontrolled emission factors of 0.3 lb/ton of sand mixed for mixing.

SAMPLE CALCULATIONS:

Fugitive Emission Rate (lb/hr) = ((1 - Capture Efficiency/100) x (Emission Factor) x (Actual Usage ton/hr) x (1-(Settling Factor)/100)

Fugitive Emission Rate (TPY) = ((1 - Capture Efficiency/100) x (Emission Factor) x (Actual Usage TPY) x (1-(Settling Factor)/100) / (2000 lb/ton)

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VOC AND HAPS FROM PUCB COREMAKING

= Actual Usage (Tons core/hr)
1,324 =Actual Usage (Tons cores/yr)

1%	% resin usage (of sand)	OCMA/AFS study
4%	% catalyst uage (of resin)	Delta
48.0%	% by weight Part I	
48.0%	% by weight Part II	

VOCS AND HAPS

	CAS #	% by Weight	Basis	Control Efficiency %	Emission Factor lb/ton	Emissions Factor Basis	Emissions lb/hr	Emissions tons/yr
Total VOCs					0.68	OCMA/AFS Study (1997)		0.45
Part 1								
Phenol	108-95-2	6.40%	24-811 Technikure Resin Part I MSDS		0.02	VOC E.F. x (Part content/100) x (HAP by weight/100)		0.01
Naphthalene*	91-20-3	3.00%	24-811 Technikure Resin Part I MSDS		0.0098	VOC E.F. x (Part content/100) x (HAP by weight/100)		0.01
Part 2								
Methylene bis (phenylisocyanate) [MDI]*	101-68-8	42.00%	23-221 Technikure Coreactant Part II MSDS		-	Form R- Reporting of Binder Chemical Used in Foundries **		-
Naphthalene*	91-20-3	2.20%	23-221 Technikure Coreactant Part II MSDS		0.0072	VOC E.F. x (Part content/100) x (HAP by weight/100)		0.00
Catalyst								
Triethyl amine (TEA)	121-44-8	100.00%		98.50%	0.012	Resin usage/100xcatalyst usage/100x(1-control eff/100)x2000 lbs/ton		0.01

* - Indicates compound is a Polycylic Organic Matter (POM)

** - Form R Reporting of Binder Chemicals Used in Foundries indicates that for PUCB Chemical #2, that MDI present 99.99% is reacted and 0.01% remains in the core. None is emitted. It is assumed that what remains in the core will be released and counted in the Pouring & Cooling emissions.

SAMPLE CALCULATIONS:

Emission Rate (lb/hr) =(Actual Usage (T/Hr)) x (Emission factor (lb/ton))

Emission Rate (TPY) =(Actual Usage (T/Yr)) x (Emission factor (lb/ton)) / (2000 lb/ton)

CLOW WATER SYSTEMS COMPANY
Coshocton, OH
Annual FER/EIS Reporting

Flow Diagram Designation: **Isocure Laempe Coremaking (F014)** (Making)

Actual Usage: 1,324 Tons/hour TPY

Process Description:

Isocure Laempe Coremaking (F014)
Control Device: 900.B1
Control Device outlet grain loading (PM/PM-10): gr/dscf
Air Flow: 10,000 scfm
Settling Factor (inside) PM/PM-10 70 %

Facility Process Name:		Criteria Pollutants							
	Isocure Laempe Coremaking (F014)								
Emission Factor Basis:		PM	SOx	NOx	VOC	CO	PM10	Lead	Units
	lb/ton sand processed								
Emission Factors:		0.35					0.35		lb/ton
(source)		Note 1					Note 1		
Capture Efficiencies:		100					100		%
Stack Emission Rate:									
	Hourly (lb/hr)	0.02					0.02		lb/hr
	Annual (TPY)	**0.00**					**0.00**		TPY
Fugitive Emission Rate:									
	Hourly (lb/hr)	0.00					0.00		lb/hr
	Annual (TPY)	**0.00**					**0.00**		TPY

Note 1: Ohio RACM Guide, Page 2-219, Table 2.7-1, gives uncontrolled emission factors of 0.35 lb/ton of cores.

SAMPLE CALCULATIONS:

Fugitive Emission Rate (lb/hr) = ((1 - Capture Efficiency/100) x (Emission Factor) x (Actual Usage ton/hr) x (1-(Settling Factor)/100)

Fugitive Emission Rate (lb/hr) = ((1 - Capture Efficiency/100) x (Emission Factor) x (Actual Usage TPY) x (1-(Settling Factor)/100)

Flow Diagram Designation

K007 - Core Wash

Actual Usage

Gal./hr

6,019 Gal./yr

Process Description:

K007 - Core Wash

Control Device: None

Control Device outlet grain loading (PM/PM-10): N/A gr/dscf

Settling Factor (inside) PM/PM-10 %

Facility Process Name:	**Criteria Pollutants**							
K007 - Core Wash								
Emission Factor Basis:	**PM**	**SOx**	**NOx**	**VOC**	**CO**	**PM10**	**Lead**	Units
lb/gal								
Emission Factors:				4.85				lb/gal
(source)				Note 1				
Capture Efficiencies:								%
Stack Emission Rate:								
Annual (TPY)								
Fugitive Emission Rate:								
Annual (TPY)				**14.60**				

Note 1: Emission factor based on VOC content of the core/mold wash used per S. Meisel at Clow.

SAMPLE CALCULATIONS:

Fugitive Emissions (TPY) = (Actual Usage (Gal./Yr)) x (VOC Content lb/gal) / (2000 lb/ton)

Flow Diagram Designation

K008 - Mold Wash

Actual Usage

Gal./hr

1,095 Gal./yr

Process Description:

K008 - Mold Wash

Control Device: None

Control Device outlet grain loading (PM/PM-10): N/A gr/dscf

Settling Factor (inside) PM/PM-10 %

Facility Process Name:		**Criteria Pollutants**							
	K008 - Mold Wash								
Emission Factor Basis:		**PM**	**SOx**	**NOx**	**VOC**	**CO**	**PM10**	**Lead**	Units
	lb/gal								
Emission Factors:					4.85				lb/gal
(source)					Note 1				
Capture Efficiencies:					0				%
Stack Emission Rate:									
	Annual (TPY)				**0.00**				
Fugitive Emission Rate:									
	Annual (TPY)				**2.66**				

Note 1: Emission factor based on VOC content of the core/mold wash used per S. Meisel at Clow.

SAMPLE CALCULATIONS:

Fugitive Emissions (TPY) = (Actual Usage (Gal./Yr)) x (VOC Content lb/gal) / (2000 lb/ton)

Flow Diagram Designation

K009 - Laempe Core Wash

Actual Usage

Gal./hr

\- Gal./yr

Process Description:

K009 - Laempe Core Wash

Control Device: None

Control Device outlet grain loading (PM/PM-10): N/A gr/dscf

Settling Factor (inside) PM/PM-10 %

Facility Process Name:		**Criteria Pollutants**							
	K009 - Laempe Core Wash								
Emission Factor Basis:		**PM**	**SOx**	**NOx**	**VOC**	**CO**	**PM10**	**Lead**	Units
	lb/gal								
Emission Factors:					4.85				lb/gal
(source)					Note 1				
Capture Efficiencies:					0				%
Stack Emission Rate:									
	Annual (TPY)				**0.00**				
Fugitive Emission Rate:									
	Annual (TPY)				**0.00**				

Note 1: Emission factor based on VOC content of the core/mold wash used per S. Meisel at Clow.

SAMPLE CALCULATIONS:

Fugitive Emissions (TPY) = (Actual Usage (Gal./Yr)) x (VOC Content lb/gal) / (2000 lb/ton)

CLOW WATER SYSTEMS COMPANY
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CLOW Water Systems Company
Coshocton, OH

Plant Roadways and Parking Areas (F019)
Paved Road Emission Calculation
AP-42 (10/97 Version) Ch. 13.2.1

$E = k * (sL/2)^{0.65} * (W/3)^{1.5}$

E = particulate emission factor (lb/VMT)
k = Base emission factor (lb/VMT)
sL = Silt loading (g/m2)
W = Mean vehicle weight (tons)

Area	k lb/VMT	sL[1] g/m^2	W tons	E lb/VMT	# of trips per year	# of miles per trip	Total miles per year	Control Efficiency4	Control Efficiency[2]	Actual Emissions PM/PM$_{10}$ Emissions (lb/hr)	Actual Emissions PM/PM$_{10}$ Emissions (TPY)
P1	0.082	1.7	4	0.11	33215	0.14	4650	80%		0.00	0.03
P2	0.082	1.7	4	0.11	12775	0.04	511	80%	70%	0.00	0.00
P3	0.082	1.7	4	0.11	9125	0.04	365	80%		0.00	0.00
P4	0.082	1.7	4	0.11	50735	0.18	9132	80%		0.01	0.06
R1	0.082	1.7	17	1.00	N/A	N/A	2670	80%	70%	0.01	0.05
R2	0.082	1.7	17	1.00	N/A	N/A	5120	80%	70%	0.01	0.09
R3	0.082	1.7	17	1.00	N/A	N/A	4038	80%	70%	0.01	0.07
R4	0.082	1.7	17	1.00	N/A	N/A	211	80%		0.00	0.01
R5	0.082	1.7	17	1.00	N/A	N/A	211	80%		0.00	0.01
R6	0.082	1.7	17	1.00	N/A	N/A	1293	80%	70%	0.00	0.02
R7	0.082	1.7	5	0.16	N/A	N/A	1913	80%	70%	0.00	0.01
R8	0.082	1.7	5	0.16	N/A	N/A	8410	80%	70%	0.00	0.02
R9	0.082	1.7	17	1.00	N/A	N/A	1513	80%	70%	0.00	0.03
									TOTAL:	0.05	**0.40**

Potential Annual Throughput: 275,000 TPY
Actual Annual Throughput: 158,643 TPY
57.7% of max capacity

[1] - Numbers derived from AP-42 (Version 10/97) Table 13.2.1-2 - Average of low ADT default values
[2] - Per OEPA guidelines (RACM), emission estimates were reduced by 70% to account for the sweeping of the paved area 3 times/week.
[3] - Potential PM/PM$_{10}$ emissions after the modification are scaled based on the hourly increase for truck traffic and no change for employee traffic.
[4] - Per OEPA guidelines (RACM), emission estimates were reduced by 80% to account for posted speed limits of 15 mph.

CLOW WATER SYSTEMS COMPANY
Coshocton, OH
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F020

Solid Waste Bunker

Load In and Load Out Emission Calculations:

E = k * 0.0032 * [(U/5)^1.3] / [(M/2)^1.4] lb/ton
(AP-42, Fifth Edition, Section 13.2.4 "Aggregate Handling and Storage Piles")

	Solid Waste[1]
k = Particle size multiplier =	0.74
U = Mean wind speed, mph =	9.8
M = Material moisture content, % =	7.5

E = 8.89E-04 lb/ton (Solid Waste)

Potential Capacity
load in rate = 319,619 TPY
41 TPH

Assuming that the Load Out rate is the same as the Load In rate:
PM Emissions from Load In and Load Out Operations:

Potential PM Emissions: Solid Waste = 0.28 TPY
0.04 lb/hr

Wind Erosion Emission Calculations:

From USEPA's Handbook for dust control at Hazardous Waste sites:
E = 1.7 x (s/1.5) x [(365 - p)/235] x (f/15)

E = emission factor in lb/day/acre
s = silt content : Solid Waste = 6.4
p = number of days with > 0.01 in. of precipitation per year = 220
f = percentage of time that the onabstructed wind speed exceeds 12 mph at the mean pile height of 20 ft = 30 %

E = 8.9 lb/acre/day (Solid Waste)

Potential Capacity
Area of Solid Waste Pile (acres) = 0.28

PM Emissions from Wind Erosion:

For maxiumum emissions, we consider 365 days per year

Potential PM Emissions:
Solid Waste Pile: x.xx lb/acre/day x x.x acres x 365 days/year = 0.45 TPY 0.10 lb/hr

36% increase in production (based on max. hourly cupola melt rate)

[1] Solid Waste is composed of Cement Sludge, Cupola Slag, Foundry Sands, General Refuse, Lime Slag and Scrubber Sludge.

CLOW WATER SYSTEMS COMPANY
Coshocton, OH
Annual FER/EIS Reporting

Flow Diagram Designation

Baghouse 250.C3 This baghouse controls: Foundry Shotblast (F015)

Process Description:

Baghouse 250.C3
Control Device outlet grain loading (PM/PM-10): 0.02 gr/dscf
Air Flow: 10,700 acfm 70 °F
Settling Factor (inside) PM/PM-10 0 %

Facility Process Name:		Criteria Pollutants							
	Baghouse 250.C3								
Emission Factor Basis:		PM	SOx	NOx	VOC	CO	PM10	Lead	Units
Emission Factors:		N/A					N/A		lb/ton
(source)									
Stack Emission Rate:									
	Annual (TPY)	8.03					8.03		TPY

SAMPLE CALCULATIONS:
Stack Emission Rate (lb/hr) = (Baghouse CFM) x (grain loading (gr/dscf)) x (460+70)/(460+gas temp)) x (60 min/hr) / (7,000 gr/lb)
Stack Emission Rate (TPY) = (Baghouse CFM) x (grain loading (gr/dscf)) x (460+70)/(460+gas temp))x (60 min/hr) / (7,000 gr/lb) x (Actual Hrs of Operation (Hr/Yr) / (2000 lb/ton)

Actual Operating Schedule
- hours/day
8760 hours/year

CLOW WATER SYSTEMS COMPANY
Coshocton, OH
Annual FER/EIS Reporting

Flow Diagram Designation

Baghouse 250.E5 This baghouse controls: Lime-Flourspar Silo (F003)

Process Description:

Baghouse 250.E5
Control Device: Baghouse
Control Device outlet grain loading (PM/PM-10): 0.03 gr/dscf
Air Flow: 500 acfm 70 °F
Settling Factor (inside) PM/PM-10 0 %

Facility Process Name:	Criteria Pollutants							
Baghouse 250.E5								
Emission Factor Basis:	PM	SOx	NOx	VOC	CO	PM10	Lead	Units
Emission Factors:	N/A					N/A		lb/ton
(source)								
Stack Emission Rate:								
Annual (TPY)	0.05					0.05		TPY

SAMPLE CALCULATIONS:
Stack Emission Rate (lb/hr) = (Baghouse CFM) x (grain loading (gr/dscf)) x (460+70)/(460+gas temp)) x (60 min/hr) / (7,000 gr/lb)
Stack Emission Rate (TPY) = (Baghouse CFM) x (grain loading (gr/dscf)) x (460+70)/(460+gas temp))x (60 min/hr) / (7,000 gr/lb) x (Actual Hrs of Operation (Hr/Yr) / (2000 lb/ton)

Actual Operating Schedule
2.2 hours/day
807 hours/year

CLOW WATER SYSTEMS COMPANY
Coshocton, OH
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Flow Diagram Designation

Baghouse 250.F4

This baghouse controls: BMM Sand Plant (F006)
BMM Shakeout (F016)
Sand Cooling Drum (F002)
BMM Pouring/Cooling (F010)

Process Description:

Baghouse 250.F4

Control Device:	Baghouse	
Control Device outlet grain loading (PM/PM-10):	0.0075 gr/dscf	
Air Flow:	90,000 acfm	70 °F
Settling Factor (inside) PM/PM-10	0 %	

Facility Process Name:	**Criteria Pollutants**							
Baghouse 250.F4								
Emission Factor Basis:	**PM**	**SOx**	**NOx**	**VOC**	**CO**	**PM10**	**Lead**	Units
Emission Factors:	N/A					N/A		lb/ton
(source)								
Stack Emission Rate:								
Annual (TPY)	**25.34**					**25.34**		TPY

SAMPLE CALCULATIONS:

Stack Emission Rate (lb/hr) = (Baghouse CFM) x (grain loading (gr/dscf)) x (460+70)/(460+gas temp)) x (60 min/hr) / (7,000 gr/lb)

Stack Emission Rate (TPY) = (Baghouse CFM) x (grain loading (gr/dscf)) x (460+70)/(460+gas temp))x (60 min/hr) / (7,000 gr/lb) x (Actual Hrs of Operation (Hr/Yr) / (2000 lb/ton)

Actual Operating Schedule

20 hours/day

8760 hours/year

CLOW WATER SYSTEMS COMPANY
Coshocton, OH
Annual FER/EIS Reporting

Flow Diagram Designation

Baghouse 250.E6

This baghouse controls: Small PUNB Core Mixer (F005)
PUCB Sand Bin (F014)

Process Description:

Baghouse 250.E6

Control Device:	Baghouse	
Control Device outlet grain loading (PM/PM-10):	0.03 gr/dscf	
Air Flow:	1,800 acfm	70 °F
Settling Factor (inside) PM/PM-10	0 %	

Facility Process Name:	**Criteria Pollutants**							
Baghouse 250.E6								
Emission Factor Basis:	**PM**	**SOx**	**NOx**	**VOC**	**CO**	**PM10**	**Lead**	Units
Emission Factors:	N/A					N/A		lb/ton
(source)								
Stack Emission Rate:								
Annual (TPY)	**2.03**					**2.03**		TPY

SAMPLE CALCULATIONS:
Stack Emission Rate (lb/hr) = (Baghouse CFM) x (grain loading (gr/dscf)) x (460+70)/(460+gas temp)) x (60 min/hr) / (7,000 gr/lb)
Stack Emission Rate (TPY) = (Baghouse CFM) x (grain loading (gr/dscf)) x (460+70)/(460+gas temp))x (60 min/hr) / (7,000 gr/lb) x (Actual Hrs of Operation (Hr/Yr) / (2000 lb/ton)

Actual Operating Schedule
- hours/day
8760 hours/year

CLOW WATER SYSTEMS COMPANY
Coshocton, OH
Annual FER/EIS Reporting

Flow Diagram Designation

Baghouse 250.E8 This baghouse controls: Sand Cement Silos (F001)

Process Description:

Baghouse 250.E8
Control Device: Baghouse
Control Device outlet grain loading (PM/PM-10): 0.03 gr/dscf
Air Flow: 500 acfm 70 °F
Settling Factor (inside) PM/PM-10 70 %

Facility Process Name:	Criteria Pollutants							
Baghouse 250.E8								
Emission Factor Basis:	PM	SOx	NOx	VOC	CO	PM10	Lead	Units
Emission Factors:	N/A					N/A		lb/ton
(source)								
Stack Emission Rate:								
Annual (TPY)	0.04					0.04		TPY

Comments: Assumes continuous use of silos which overestimates emissions.

Positive pressure dust collector with estimated forced flow of 700 CFM during loading.

Baghouse vents indoors therefore emissions have been quantified as fugitive and 70% settling factor has been taken into account.

SAMPLE CALCULATIONS:

Stack Emission Rate (lb/hr) = (Baghouse CFM) x (grain loading (gr/dscf)) x (460+70)/(460+gas temp)) x (60 min/hr) / (7,000 gr/lb)

Stack Emission Rate (TPY) = (Baghouse CFM) x (grain loading (gr/dscf)) x (460+70)/(460+gas temp))x (60 min/hr) / (7,000 gr/lb) x (Actual Hrs of Operation (Hr/Yr) / (2000 lb/ton)

Actual Operating Schedule

6 hours/day

2279 hours/year

CLOW WATER SYSTEMS COMPANY
Coshocton, OH
Annual FER/EIS Reporting

Flow Diagram Designation

Baghouse 250.E9 This baghouse controls: Sand Cement Bins (F001)

Process Description:

Baghouse 250.E9

Control Device:	Baghouse	
Control Device outlet grain loading (PM/PM-10):	0.03 gr/dscf	
Air Flow:	500 acfm	70 °F
Settling Factor (inside) PM/PM-10	0 %	

Facility Process Name:		**Criteria Pollutants**							
	Baghouse 250.E9								
Emission Factor Basis:		**PM**	**SOx**	**NOx**	**VOC**	**CO**	**PM10**	**Lead**	Units
Emission Factors:		N/A					N/A		lb/ton
(source)									
Stack Emission Rate:									
	Annual (TPY)	**0.39**					**0.39**		TPY

Comments: Emissions calculated do not account for minimal usage of silo.
Silo is loaded a maximum of twice per week for a maximum of 1 hour.
Positive pressure dust collector with estimated forced flow of 880 CFM during loading.

SAMPLE CALCULATIONS:

Stack Emission Rate (lb/hr) = (Baghouse CFM) x (grain loading (gr/dscf)) x (460+70)/(460+gas temp)) x (60 min/hr) / (7,000 gr/lb)

Stack Emission Rate (TPY) = (Baghouse CFM) x (grain loading (gr/dscf)) x (460+70)/(460+gas temp))x (60 min/hr) / (7,000 gr/lb) x (Actual Hrs of Operation (Hr/Yr) / (2000 lb/ton)

Actual Operating Schedule

20 hours/day
6000 hours/year

CLOW WATER SYSTEMS COMPANY
Coshocton, OH
Annual FER/EIS Reporting

Flow Diagram Designation

Baghouse 250.F3

This baghouse controls: Desulfurization & Innoculation (F004)
Jolt Sand Plant (P007)
Jolt Pouring & Cooling (F009)
Jolt Shakeout (F007)

Process Description:

Baghouse 250.F3

Control Device:	Baghouse	
Control Device outlet grain loading (PM/PM-10):	0.0075 gr/dscf	
Air Flow:	95,000 acfm	100 °F
Settling Factor (inside) PM/PM-10	0 %	

Facility Process Name:		**Criteria Pollutants**							
	Baghouse 250.F3								
Emission Factor Basis:		**PM**	**SOx**	**NOx**	**VOC**	**CO**	**PM10**	**Lead**	Units
Emission Factors:		N/A					N/A		lb/ton
(source)									
Stack Emission Rate:									
	Annual (TPY)	**25.32**					**25.32**		TPY

SAMPLE CALCULATIONS:
Stack Emission Rate (lb/hr) = (Baghouse CFM) x (grain loading (gr/dscf)) x (460+70)/(460+gas temp)) x (60 min/hr) / (7,000 gr/lb)
Stack Emission Rate (TPY) = (Baghouse CFM) x (grain loading (gr/dscf)) x (460+70)/(460+gas temp))x (60 min/hr) / (7,000 gr/lb) x (Actual Hrs of Operation (Hr/Yr) / (2000 lb/ton)

Actual Operating Schedule
20 hours/day
8760 hours/year

OhioEPA
State of Ohio Environmental Protection Agency

Facility Name: **Clow Water Systems Company**
Facility ID: **06-16-01-0006**
Title: **FAC EF 03**

Emissions Reporting Form: Facility Information

Summary of emissions for all linked forms:

Emissions Unit ID	SCC ID	PART	SO2	NOx	CO	OC	VOC	Hg	Pb	As	Bz	Be	Ab	VC	PM10
F004	3-04-003-10	0.99	0.00	0.00	0.00	0.40	0.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.99
F005	3-04-003-56	0.26	0.00	0.00	0.00	4.11	4.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.22
F006	3-04-003-50	0.37	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.06
F007	3-04-003-31	25.35	0.00	0.00	2.08	2.49	2.49	0.00	0.00	0.00	0.00	0.00	0.00	0.00	25.33
F009	3-04-003-20	1.33	0.04	0.02	6.20	0.42	0.42	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.09
F010	3-04-003-20	0.01	0.04	0.02	5.85	0.39	0.39	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01
F011	3-04-003-60	1.43	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
F014	3-04-003-71	2.09	0.00	0.00	0.00	0.45	0.45	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.09
F015	3-04-003-41	8.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8.03
F016	3-04-003-31	25.36	0.00	0.00	1.96	2.35	2.35	0.00	0.00	0.00	0.00	0.00	0.00	0.00	25.35
F017	3-04-003-15	5.55	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.33
F018	3-04-003-20	9.03	0.00	0.00	0.00	10.54	10.54	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8.31
K002	4-02-001-10	0.44	0.00	0.00	0.00	6.30	6.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.41
K006	4-02-001-10	0.20	0.00	0.00	0.00	23.45	23.45	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18
K007	3-04-003-98	0.00	0.00	0.00	0.00	14.60	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
K008	3-04-003-98	0.00	0.00	0.00	0.00	2.66	2.66	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
P007	3-04-003-50	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02
P020	3-04-003-05	0.85	0.07	11.12	9.34	1.22	0.61	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.85
P901	3-04-003-01	19.04	4.76	36.49	40.45	21.42	21.42	0.00	0.03	0.00	0.00	0.00	0.00	0.00	14.79
	Totals:	100.47	4.91	47.65	65.88	90.80	75.59	0.00	0.03	0.00	0.00	0.00	0.00	0.00	91.06

Emissions Contacts

Contact Type: Fees

First Name: **William**
Middle Name/Initial: **Patrick**
Last Name: **Huth**
Address Line 1: **P.O.Box 6001**
Address Line 2: **2266 S. 6th Street**
Address City: **Coshocton**
City/Village/Township: **OH**
ZIP Code: **43812 - 6001**
Phone Number: **(740) 622 - 6651**

Contact Type: Inventory

First Name: **William**
Middle Name/Initial: **Patrick**
Last Name: **Huth**
Address Line 1: **P.O.Box 6001**
Address Line 2: **2266 S. 6th Street**
Address City: **Coshocton**
City/Village/Township: **OH**
ZIP Code: **43812 - 6001**
Phone Number: **(740) 622 - 6651**

Contact Type: Statement

First Name: **William**
Middle Name/Initial: **Patrick**
Last Name: **Huth**
Address Line 1: **P.O.Box 6001**
Address Line 2: **2266 S. 6th Street**
Address City: **Coshocton**
City/Village/Township: **OH**
ZIP Code: **43812 - 6001**
Phone Number: **(740) 622 - 6651**

Documents Linked To: **FAC EF 03**

Document Name	Emissions Unit ID
2003-F004	F004
2003-F005	F005
2003-F006	F006
2003-F007	F007
2003-F009	F009
2003-F010	F010
2003-F011	F011
2003-F014	F014
2003-F015	F015
2003-F016	F016
2003-F017	F017
2003-F018	F018
2003-K002	K002
2003-K006	K006
2003-K007	K007
2003-K008	K008
2003-P007	P007
2003-P020	P020
2003-P901	P901

State of Ohio Environmental Protection Agency

Facility Name: **Clow Water Systems Company**
Facility ID: **06-16-01-0006**
Title: **2003-F004**

Emissions Reporting Form: Emissions Unit Information

General Information

1. Emissions form(s): ☒ **Emissions fee report** ☐ Emissions statement ☒ **Emissions inventory**

2. Reporting period: **2003**

3. OEPA ID(s): **DESULFURIZATION & INOCULATION (F004)**

4. Annual operating hours: **2,300**

SCC Information

5. Select an SCC ID and complete the table below:

SCC ID: **3-04-003-10**

User Description for SCC (optional):

SCC operating rate units: **Tons of Metal Inoculated**

SCC Annual Operating Rate [SCC Units]: **158,643.00000**

Ash [%]: **0.00**

Maximum Hourly Operating Rate [SCC Units]: **85.000**

Sulfur [%]: **0.00**

SCC Comments:

6. Emissions information:

SCC ID: **3-04-003-10** Pollutant ID: **Organic compounds**

Emissions Method Description: **Other**

Overall Efficiency Method: **Not applicable**

Auto-calculate Emissions? (Y/N): **No**

Emissions Factor:

Primary Control Equipment Description: **No Control Method**

Emissions Factor Units:

Year Installed (Primary):

Factor Controlled? (Y/N):

Secondary Control Equipment Description: **No Control Method**

Emissions Factor Operating Rate:

Year Installed (Secondary):

Emissions Factor Operating Rate Units:

Control System Capture Efficiency:

Control Device Efficiency:

Overall Device Efficiency: **0.00**

Annual Adjustment Factor: **0.00**

Emissions [tons/yr]: **0.40**

Supporting Emissions Calculation Data:

See "2003 FER calcs.xls".

6. Emissions information: (continued)

SCC ID: **3-04-003-10** Pollutant ID: **PM =< 10 microns**

Emissions Method Description: **Other**

Auto-calculate Emissions? (Y/N): **No**

Primary Control Equipment Description: **Fabric Filter Low Temperature**

Year Installed (Primary): **1998**

Secondary Control Equipment Description: **No Control Method**

Year Installed (Secondary):

Control System Capture Efficiency:

Control Device Efficiency:

Overall Device Efficiency: **99.90**

Annual Adjustment Factor: **0.00**

Overall Efficiency Method: **Design**

Emissions Factor:

Emissions Factor Units:

Factor Controlled? (Y/N):

Emissions Factor Operating Rate:

Emissions Factor Operating Rate Units:

Emissions [tons/yr]: **0.99**

Supporting Emissions Calculation Data:

See "2003 FER calcs.xls". Stack emissions from the baghouse associated with this emission unit are reported under F007.

SCC ID: **3-04-003-10** Pollutant ID: **PM =< 2.5 microns**

Emissions Method Description: **Other**

Auto-calculate Emissions? (Y/N): **No**

Primary Control Equipment Description: **Fabric Filter Low Temperature**

Year Installed (Primary): **1998**

Secondary Control Equipment Description: **No Control Method**

Year Installed (Secondary):

Control System Capture Efficiency:

Control Device Efficiency:

Overall Device Efficiency: **99.90**

Annual Adjustment Factor: **0.00**

Overall Efficiency Method: **Design**

Emissions Factor:

Emissions Factor Units:

Factor Controlled? (Y/N):

Emissions Factor Operating Rate:

Emissions Factor Operating Rate Units:

Emissions [tons/yr]: **0.62**

Supporting Emissions Calculation Data:

See "2003 FER calcs.xls". Stack emissions from the baghouse associated with this emission unit are reported under F007.

6. Emissions information: (continued)

SCC ID: **3-04-003-10** Pollutant ID: **Particulate Matter**

Emissions Method Description: **Other**

Auto-calculate Emissions? (Y/N): **No**

Primary Control Equipment Description: **Fabric Filter Low Temperature**

Year Installed (Primary): **1998**

Secondary Control Equipment Description: **No Control Method**

Year Installed (Secondary):

Control System Capture Efficiency:

Control Device Efficiency:

Overall Device Efficiency: **99.90**

Annual Adjustment Factor: **0.00**

Overall Efficiency Method: **Design**

Emissions Factor:

Emissions Factor Units:

Factor Controlled? (Y/N):

Emissions Factor Operating Rate:

Emissions Factor Operating Rate Units:

Emissions [tons/yr]: **0.99**

Supporting Emissions Calculation Data:

See "2003 FER calcs.xls". Stack emissions from the baghouse associated with this emission unit are reported under F007.

SCC ID: **3-04-003-10** Pollutant ID: **Volatile organic compounds**

Emissions Method Description: **Other**

Auto-calculate Emissions? (Y/N): **No**

Primary Control Equipment Description: **No Control Method**

Year Installed (Primary):

Secondary Control Equipment Description: **No Control Method**

Year Installed (Secondary):

Control System Capture Efficiency:

Control Device Efficiency:

Overall Device Efficiency: **0.00**

Annual Adjustment Factor: **0.00**

Overall Efficiency Method: **Not applicable**

Emissions Factor:

Emissions Factor Units:

Factor Controlled? (Y/N):

Emissions Factor Operating Rate:

Emissions Factor Operating Rate Units:

Emissions [tons/yr]: **0.40**

Supporting Emissions Calculation Data:

See "2003 FER calcs.xls".

7. Summary for all SCC IDs:

SCC ID	PART	SO2	NOx	CO	OC	VOC	Hg	Pb	As	Bz
3-04-003-10	0.99	0	0	0	0.4	0.4	0	0	0	0
Totals:	0.99	0	0	0	0.4	0.4	0	0	0	0

Schedule

8. Boiler design capacity/heat input: **0.00** (MMBtu/hr)

9. Space heat: **0.00** (%)

10. Annual throughput:

December - February: **25.00** (%)
March - May: **25.00** (%)
June - August: **25.00** (%)
September - November: **25.00** (%)

11. Normal operating schedule

Hours/day: **9**
Days/week: **5**
Weeks/year: **50**

12. Peak ozone season daily emissions rate:

VOC: **0.000** (lbs/day)
NOx: **0.000** (lbs/day)
☐ Autocalculated

Inventory

13. Construction date: **6/77**

14. Modification date: **7/95**

15. Shutdown date:

16. Emissions unit comments (optional):

17. Federally-enforceable operating restrictions:

Point Information

18. Emissions point centroid location:

○ UTM	Zone	Vertical	Horizontal	● Lat/Long		Degrees	Minutes	Seconds
	17	4452.67	426.78		Latitude:	40	14	51
					Longitude:	81	51	39

19. Associated emissions egress point:

Emissions Egress Point ID: **03F004.B6**

Emissions Egress Point Type: **Vertical**
Geographical Preference: **Lat/Long**
UTM Zone: **17**
UTM Vertical: **4,452.64**
UTM Horizontal: **426.80**
Longitude: **81**
Longitude: **51**
Longitude: **38**
Latitude: **40**
Latitude: **14**
Latitude: **50**
Continuous Emissions Recorder? (Y/N): **No**
GEP Building Height [ft]: **42.00**
GEP Building Length [ft]: **630.00**
GEP Building Width [ft]: **350.00**

Shape: **Round**
Emissions Egress Point Cross Sectional Area [sq ft]: **20**
Emissions Egress Point Height [ft]: **11.25**
Emissions Egress Point Diameter [ft]: **5.15**
Exit Gas Temperature at Maximum Operation [° F]: **150**
Exit Gas Temperature at Average Operation [° F]: **120**
Exit Gas Flow at Maximum Operation [acfm]: **80,000**
Exit Gas Flow at Average Operation [acfm]: **64,000**
Emission Egress Point Base Elevation [ft]: **764**
Release Height [ft]:
Plume Temperature [° F]:
Area of Emissions [sq ft]:

19. Associated emissions egress point: (continued)

Emissions Egress Point ID: **04FAN .B7**

Emissions Egress Point Type: **Vertical**
Geographical Preference: **Lat/Long**
UTM Zone: **17**
UTM Vertical: **4,452.67**
UTM Horizontal: **426.78**
Longitude: **81**
Longitude: **51**
Longitude: **39**
Latitude: **40**
Latitude: **14**
Latitude: **51**
Continuous Emissions Recorder? (Y/N):
GEP Building Height [ft]:
GEP Building Length [ft]:
GEP Building Width [ft]:

Shape: **Round**
Emissions Egress Point Cross Sectional Area [sq ft]: **27**
Emissions Egress Point Height [ft]: **56.33**
Emissions Egress Point Diameter [ft]: **5.92**
Exit Gas Temperature at Maximum Operation [° F]: **70**
Exit Gas Temperature at Average Operation [° F]: **70**
Exit Gas Flow at Maximum Operation [acfm]: **54,000**
Exit Gas Flow at Average Operation [acfm]: **54,000**
Emission Egress Point Base Elevation [ft]: **764**
Release Height [ft]:
Plume Temperature [° F]:
Area of Emissions [sq ft]:

Emissions Egress Point ID: **05FAN .B7**

Emissions Egress Point Type: **Vertical**
Geographical Preference: **Lat/Long**
UTM Zone: **17**
UTM Vertical: **4,452.67**
UTM Horizontal: **426.78**
Longitude: **81**
Longitude: **51**
Longitude: **39**
Latitude: **40**
Latitude: **14**
Latitude: **51**
Continuous Emissions Recorder? (Y/N):
GEP Building Height [ft]:
GEP Building Length [ft]:
GEP Building Width [ft]:

Shape: **Round**
Emissions Egress Point Cross Sectional Area [sq ft]: **27**
Emissions Egress Point Height [ft]: **56.33**
Emissions Egress Point Diameter [ft]: **5.92**
Exit Gas Temperature at Maximum Operation [° F]: **70**
Exit Gas Temperature at Average Operation [° F]: **70**
Exit Gas Flow at Maximum Operation [acfm]: **54,000**
Exit Gas Flow at Average Operation [acfm]: **54,000**
Emission Egress Point Base Elevation [ft]: **764**
Release Height [ft]:
Plume Temperature [° F]:
Area of Emissions [sq ft]:

Confidential Claims

20. Complete the table below:

Confidential item:

Basis for confidentiality claim:

State of Ohio Environmental Protection Agency

Facility Name: **Clow Water Systems Company**
Facility ID: **06-16-01-0006**
Title: **2003-F005**

Emissions Reporting Form: Emissions Unit Information

General Information

1. Emissions form(s): ☒ **Emissions fee report** ☐ Emissions statement ☒ **Emissions inventory**

2. Reporting period: **2003**

3. OEPA ID(s): **FOUNDRY SAND SILOS & MIXERS (F005)**

4. Annual operating hours: **2,023**

SCC Information

5. Select an SCC ID and complete the table below:

SCC ID: **3-04-003-56**

User Description for SCC (optional):

SCC operating rate units: **Tons Sand Handled**

SCC Annual Operating Rate [SCC Units]: **5,725.00000**

Ash [%]:

Maximum Hourly Operating Rate [SCC Units]: **5.000**

Sulfur [%]:

SCC Comments:

6. Emissions information:

SCC ID: **3-04-003-56** Pollutant ID: **Organic compounds**

Emissions Method Description: **Other**

Overall Efficiency Method: **Not applicable**

Auto-calculate Emissions? (Y/N): **No**

Emissions Factor:

Emissions Factor Units:

Primary Control Equipment Description: **No Control Method**

Year Installed (Primary):

Factor Controlled? (Y/N):

Secondary Control Equipment Description: **No Control Method**

Emissions Factor Operating Rate:

Year Installed (Secondary):

Emissions Factor Operating Rate Units:

Control System Capture Efficiency:

Control Device Efficiency:

Overall Device Efficiency: **0.00**

Annual Adjustment Factor: **0.00**

Emissions [tons/yr]: **4.11**

Supporting Emissions Calculation Data:

See "2003 FER calcs.xls"

6. Emissions information: (continued)

SCC ID: **3-04-003-56** Pollutant ID: **PM =< 10 microns**

Emissions Method Description: **Other**

Auto-calculate Emissions? (Y/N): **No**

Primary Control Equipment Description: **Fabric Filter Low Temperature**

Year Installed (Primary): **1995**

Secondary Control Equipment Description: **No Control Method**

Year Installed (Secondary):

Control System Capture Efficiency:

Control Device Efficiency:

Overall Device Efficiency: **99.00**

Annual Adjustment Factor: **0.00**

Overall Efficiency Method: **Estimated**

Emissions Factor:

Emissions Factor Units:

Factor Controlled? (Y/N):

Emissions Factor Operating Rate:

Emissions Factor Operating Rate Units:

Emissions [tons/yr]: **0.22**

Supporting Emissions Calculation Data:

See "2003 FER calcs.xls". Stack emissions from the baghouse associated with this emission unit are reported under F014.

SCC ID: **3-04-003-56** Pollutant ID: **PM =< 2.5 microns**

Emissions Method Description: **Other**

Auto-calculate Emissions? (Y/N): **No**

Primary Control Equipment Description: **Fabric Filter Low Temperature**

Year Installed (Primary): **1995**

Secondary Control Equipment Description: **No Control Method**

Year Installed (Secondary):

Control System Capture Efficiency:

Control Device Efficiency:

Overall Device Efficiency: **99.00**

Annual Adjustment Factor: **0.00**

Overall Efficiency Method: **Estimated**

Emissions Factor:

Emissions Factor Units:

Factor Controlled? (Y/N):

Emissions Factor Operating Rate:

Emissions Factor Operating Rate Units:

Emissions [tons/yr]: **0.08**

Supporting Emissions Calculation Data:

See "2003 FER calcs.xls". Stack emissions from the baghouse associated with this emission unit are reported under F014.

6. Emissions information: (continued)

SCC ID: **3-04-003-56** Pollutant ID: **Particulate Matter**

Emissions Method Description: **Other**

Auto-calculate Emissions? (Y/N): **No**

Primary Control Equipment Description: **Fabric Filter Low Temperature**

Year Installed (Primary): **1995**

Secondary Control Equipment Description: **No Control Method**

Year Installed (Secondary):

Control System Capture Efficiency:

Control Device Efficiency:

Overall Device Efficiency: **99.00**

Annual Adjustment Factor: **0.00**

Overall Efficiency Method: **Estimated**

Emissions Factor:

Emissions Factor Units:

Factor Controlled? (Y/N):

Emissions Factor Operating Rate:

Emissions Factor Operating Rate Units:

Emissions [tons/yr]: **0.26**

Supporting Emissions Calculation Data:

See "2003 FER calcs.xls". Stack emissions from the baghouse associated with this emission unit are reported under F014.

SCC ID: **3-04-003-56** Pollutant ID: **Volatile organic compounds**

Emissions Method Description: **Other**

Auto-calculate Emissions? (Y/N): **No**

Primary Control Equipment Description: **No Control Method**

Year Installed (Primary):

Secondary Control Equipment Description: **No Control Method**

Year Installed (Secondary):

Control System Capture Efficiency:

Control Device Efficiency:

Overall Device Efficiency: **0.00**

Annual Adjustment Factor: **0.00**

Overall Efficiency Method: **Not applicable**

Emissions Factor:

Emissions Factor Units:

Factor Controlled? (Y/N):

Emissions Factor Operating Rate:

Emissions Factor Operating Rate Units:

Emissions [tons/yr]: **4.11**

Supporting Emissions Calculation Data:

See "2003 FER calcs.xls"

7. Summary for all SCC IDs:

SCC ID	PART	SO2	NOx	CO	OC	VOC	Hg	Pb	As	Bz
3-04-003-56	0.26	0	0	0	4.11	4.11	0	0	0	0
Totals:	0.26	0	0	0	4.11	4.11	0	0	0	0

Schedule

8. Boiler design capacity/heat input: **0.00** (MMBtu/hr)

9. Space heat: **0.00** (%)

10. Annual throughput:

December - February: **25.00** (%)
March - May: **25.00** (%)
June - August: **25.00** (%)
September - November: **25.00** (%)

11. Normal operating schedule

Hours/day: **9**
Days/week: **5**
Weeks/year: **48**

12. Peak ozone season daily emissions rate:

VOC: **22.340** (lbs/day)
NOx: **0.000** (lbs/day)
☒ **Autocalculated**

Inventory

13. Construction date: **6/53**

14. Modification date:

15. Shutdown date:

16. Emissions unit comments (optional):

17. Federally-enforceable operating restrictions:

Point Information

18. Emissions point centroid location:

○ UTM — Zone: **17** Vertical: **4452.57** Horizontal: **426.80**

● Lat/Long

	Degrees	Minutes	Seconds
Latitude:	**40**	**14**	**48**
Longitude:	**81**	**51**	**38**

19. Associated emissions egress point:

Emissions Egress Point ID: **40FAN .B8**

Emissions Egress Point Type: **Vertical**
Geographical Preference: **Lat/Long**
UTM Zone: **17**
UTM Vertical: **4,452.57**
UTM Horizontal: **426.80**
Longitude: **81**
Longitude: **51**
Longitude: **38**
Latitude: **40**
Latitude: **14**
Latitude: **48**
Continuous Emissions Recorder? (Y/N):
GEP Building Height [ft]:
GEP Building Length [ft]:
GEP Building Width [ft]:

Shape: **Round**
Emissions Egress Point Cross Sectional Area [sq ft]: **27**
Emissions Egress Point Height [ft]: **31.27**
Emissions Egress Point Diameter [ft]: **5.92**
Exit Gas Temperature at Maximum Operation [° F]: **70**
Exit Gas Temperature at Average Operation [° F]: **70**
Exit Gas Flow at Maximum Operation [acfm]: **54,000**
Exit Gas Flow at Average Operation [acfm]: **54,000**
Emission Egress Point Base Elevation [ft]: **765**
Release Height [ft]:
Plume Temperature [° F]:
Area of Emissions [sq ft]:

19. Associated emissions egress point: (continued)

Emissions Egress Point ID: **41F005.B8**

Emissions Egress Point Type: **Vertical**
Geographical Preference: **Lat/Long**
UTM Zone: **17**
UTM Vertical: **4,452.57**
UTM Horizontal: **426.80**
Longitude: **81**
Longitude: **51**
Longitude: **38**
Latitude: **40**
Latitude: **14**
Latitude: **48**
Continuous Emissions Recorder? (Y/N):
GEP Building Height [ft]:
GEP Building Length [ft]:
GEP Building Width [ft]:

Shape: **Round**
Emissions Egress Point Cross Sectional Area [sq ft]: **0**
Emissions Egress Point Height [ft]: **15.00**
Emissions Egress Point Diameter [ft]: **0.67**
Exit Gas Temperature at Maximum Operation [° F]: **70**
Exit Gas Temperature at Average Operation [° F]: **70**
Exit Gas Flow at Maximum Operation [acfm]: **1,800**
Exit Gas Flow at Average Operation [acfm]: **1,800**
Emission Egress Point Base Elevation [ft]: **765**
Release Height [ft]:
Plume Temperature [° F]:
Area of Emissions [sq ft]:

Confidential Claims

20. Complete the table below:

Confidential item:

Basis for confidentiality claim:

State of Ohio Environmental Protection Agency

Facility Name: **Clow Water Systems Company**
Facility ID: **06-16-01-0006**
Title: **2003-F006**

Emissions Reporting Form: Emissions Unit Information

General Information

1. Emissions form(s): ☒ **Emissions fee report** ☐ Emissions statement ☒ **Emissions inventory**

2. Reporting period: **2003**

3. OEPA ID(s): **BMM SAND PLANT (F006)**

4. Annual operating hours: **2,023**

SCC Information

5. Select an SCC ID and complete the table below:

SCC ID: **3-04-003-50**

User Description for SCC (optional):

SCC operating rate units: **Tons Sand Handled**

SCC Annual Operating Rate [SCC Units]: **69,360.00000**

Ash [%]:

Maximum Hourly Operating Rate [SCC Units]: **75.000**

Sulfur [%]:

SCC Comments:

6. Emissions information:

SCC ID: **3-04-003-50** Pollutant ID: **PM =< 10 microns**

Emissions Method Description: **Other**

Overall Efficiency Method: **Estimated**

Auto-calculate Emissions? (Y/N): **No**

Emissions Factor:

Primary Control Equipment Description: **Fabric Filter Low Temperature**

Emissions Factor Units:

Year Installed (Primary): **2000**

Factor Controlled? (Y/N):

Secondary Control Equipment Description: **No Control Method**

Emissions Factor Operating Rate:

Year Installed (Secondary):

Emissions Factor Operating Rate Units:

Control System Capture Efficiency:

Control Device Efficiency:

Overall Device Efficiency: **99.00**

Annual Adjustment Factor: **0.00**

Emissions [tons/yr]: **0.06**

Supporting Emissions Calculation Data:

See "2003 FER calcs.xls". Stack emissions from the baghouse associated with this emission unit are reported under F016.

6. Emissions information: (continued)

SCC ID: **3-04-003-50** Pollutant ID: **PM =< 2.5 microns**

Emissions Method Description: **Other**

Auto-calculate Emissions? (Y/N): **No**

Primary Control Equipment Description: **Fabric Filter Low Temperature**

Year Installed (Primary): **2000**

Secondary Control Equipment Description: **No Control Method**

Year Installed (Secondary):

Control System Capture Efficiency:

Control Device Efficiency:

Overall Device Efficiency: **99.00**

Annual Adjustment Factor: **0.00**

Overall Efficiency Method: **Estimated**

Emissions Factor:

Emissions Factor Units:

Factor Controlled? (Y/N):

Emissions Factor Operating Rate:

Emissions Factor Operating Rate Units:

Emissions [tons/yr]: **0.02**

Supporting Emissions Calculation Data:

See "2003 FER calcs.xls". Stack emissions from the baghouse associated with this emission unit are reported under F016.

SCC ID: **3-04-003-50** Pollutant ID: **Particulate Matter**

Emissions Method Description: **Other**

Auto-calculate Emissions? (Y/N): **No**

Primary Control Equipment Description: **Fabric Filter Low Temperature**

Year Installed (Primary): **2000**

Secondary Control Equipment Description: **No Control Method**

Year Installed (Secondary):

Control System Capture Efficiency:

Control Device Efficiency:

Overall Device Efficiency: **99.00**

Annual Adjustment Factor: **0.00**

Overall Efficiency Method: **Estimated**

Emissions Factor:

Emissions Factor Units:

Factor Controlled? (Y/N):

Emissions Factor Operating Rate:

Emissions Factor Operating Rate Units:

Emissions [tons/yr]: **0.37**

Supporting Emissions Calculation Data:

See "2003 FER calcs.xls". Stack emissions from the baghouse associated with this emission unit are reported under F016.

7. Summary for all SCC IDs:

SCC ID	PART	SO2	NOx	CO	OC	VOC	Hg	Pb	As	Bz
3-04-003-50	0.37	0	0	0	0	0	0	0	0	0
Totals:	0.37	0	0	0	0	0	0	0	0	0

Schedule

8. Boiler design capacity/heat input: **0.00** (MMBtu/hr)

9. Space heat: **0.00** (%)

10. Annual throughput:

December - February: **25.00** (%)
March - May: **25.00** (%)
June - August: **25.00** (%)
September - November: **25.00** (%)

11. Normal operating schedule

Hours/day: **9**
Days/week: **5**
Weeks/year: **48**

12. Peak ozone season daily emissions rate:

VOC: **0.000** (lbs/day)
NOx: **0.000** (lbs/day)

☒ **Autocalculated**

Inventory

13. Construction date: **6/61**

14. Modification date: **6/74**

15. Shutdown date:

16. Emissions unit comments (optional):

17. Federally-enforceable operating restrictions:

Point Information

18. Emissions point centroid location:

○ UTM	Zone	Vertical	Horizontal	● Lat/Long		Degrees	Minutes	Seconds
	17	**4452.54**	**426.83**		Latitude:	**40**	**14**	**47**
					Longitude:	**81**	**51**	**37**

19. Associated emissions egress point:

Emissions Egress Point ID: **44FAN .B9**

Emissions Egress Point Type: **Vertical**
Geographical Preference: **Lat/Long**
UTM Zone: **17**
UTM Vertical: **4,452.54**
UTM Horizontal: **426.83**
Longitude: **81**
Longitude: **51**
Longitude: **37**
Latitude: **40**
Latitude: **14**
Latitude: **47**
Continuous Emissions Recorder? (Y/N):
GEP Building Height [ft]:
GEP Building Length [ft]:
GEP Building Width [ft]:

Shape: **Round**
Emissions Egress Point Cross Sectional Area [sq ft]: **27**
Emissions Egress Point Height [ft]: **61.54**
Emissions Egress Point Diameter [ft]: **5.92**
Exit Gas Temperature at Maximum Operation [° F]: **70**
Exit Gas Temperature at Average Operation [° F]: **70**
Exit Gas Flow at Maximum Operation [acfm]: **54,000**
Exit Gas Flow at Average Operation [acfm]: **54,000**
Emission Egress Point Base Elevation [ft]: **765**
Release Height [ft]:
Plume Temperature [° F]:
Area of Emissions [sq ft]:

19. Associated emissions egress point: (continued)

Emissions Egress Point ID: **63FAN.B9**

Emissions Egress Point Type: **Vertical**
Geographical Preference: **Lat/Long**
UTM Zone: **17**
UTM Vertical: **4,452.54**
UTM Horizontal: **426.80**
Longitude: **81**
Longitude: **51**
Longitude: **38**
Latitude: **40**
Latitude: **14**
Latitude: **47**
Continuous Emissions Recorder? (Y/N): **No**
GEP Building Height [ft]: **42.00**
GEP Building Length [ft]: **630.00**
GEP Building Width [ft]: **350.00**

Shape: **Round**
Emissions Egress Point Cross Sectional Area [sq ft]: **24**
Emissions Egress Point Height [ft]: **28.30**
Emissions Egress Point Diameter [ft]: **5.58**
Exit Gas Temperature at Maximum Operation [° F]: **120**
Exit Gas Temperature at Average Operation [° F]: **90**
Exit Gas Flow at Maximum Operation [acfm]: **96,000**
Exit Gas Flow at Average Operation [acfm]: **96,000**
Emission Egress Point Base Elevation [ft]: **762**
Release Height [ft]:
Plume Temperature [° F]:
Area of Emissions [sq ft]:

Confidential Claims

20. Complete the table below:

Confidential item:

Basis for confidentiality claim:

Emissions Reporting Form: Emissions Unit Information

General Information

1. Emissions form(s): ☒ **Emissions fee report** ☐ Emissions statement ☒ **Emissions inventory**

2. Reporting period: **2003**

3. OEPA ID(s): **SHAKEOUT CIRCUIT (F007)**

4. Annual operating hours: **2,023**

SCC Information

5. Select an SCC ID and complete the table below:

SCC ID: **3-04-003-31**

User Description for SCC (optional):

SCC operating rate units: **Tons of Metal Charged**

SCC Annual Operating Rate [SCC Units]: **4,150.00000**

Ash [%]: **0.00**

Maximum Hourly Operating Rate [SCC Units]: **5.000**

Sulfur [%]: **0.00**

SCC Comments:

6. Emissions information:

SCC ID: **3-04-003-31** Pollutant ID: **Carbon monoxide**

Emissions Method Description: **Other**

Overall Efficiency Method: **Not applicable**

Auto-calculate Emissions? (Y/N): **No**

Emissions Factor:

Emissions Factor Units:

Primary Control Equipment Description: **No Control Method**

Year Installed (Primary):

Factor Controlled? (Y/N):

Secondary Control Equipment Description: **No Control Method**

Emissions Factor Operating Rate:

Year Installed (Secondary):

Control System Capture Efficiency:

Emissions Factor Operating Rate Units:

Control Device Efficiency:

Overall Device Efficiency: **0.00**

Annual Adjustment Factor: **0.00**

Emissions [tons/yr]: **2.08**

Supporting Emissions Calculation Data:

See "2003 FER calcs.xls".

6. Emissions information: (continued)

SCC ID: **3-04-003-31** Pollutant ID: **Organic compounds**

Emissions Method Description: **Other**

Auto-calculate Emissions? (Y/N): **No**

Primary Control Equipment Description: **No Control Method**

Year Installed (Primary):

Secondary Control Equipment Description: **No Control Method**

Year Installed (Secondary):

Control System Capture Efficiency:

Control Device Efficiency:

Overall Device Efficiency: **0.00**

Annual Adjustment Factor: **0.00**

Overall Efficiency Method: **Not applicable**

Emissions Factor:

Emissions Factor Units:

Factor Controlled? (Y/N):

Emissions Factor Operating Rate:

Emissions Factor Operating Rate Units:

Emissions [tons/yr]: **2.49**

Supporting Emissions Calculation Data:

See "2003 FER calcs.xls".

SCC ID: **3-04-003-31** Pollutant ID: **PM =< 10 microns**

Emissions Method Description: **Other**

Auto-calculate Emissions? (Y/N): **No**

Primary Control Equipment Description: **Fabric Filter Low Temperature**

Year Installed (Primary): **1998**

Secondary Control Equipment Description: **No Control Method**

Year Installed (Secondary):

Control System Capture Efficiency:

Control Device Efficiency:

Overall Device Efficiency: **99.90**

Annual Adjustment Factor: **0.00**

Overall Efficiency Method: **Not applicable**

Emissions Factor:

Emissions Factor Units:

Factor Controlled? (Y/N):

Emissions Factor Operating Rate:

Emissions Factor Operating Rate Units:

Emissions [tons/yr]: **25.33**

Supporting Emissions Calculation Data:

See "2003 FER calcs.xls". Stack emissions from the baghouse associated with this emission unit and F004, P007, F009 are reported with this unit.

6. Emissions information: (continued)

SCC ID: **3-04-003-31** Pollutant ID: **PM =< 2.5 microns**

Emissions Method Description: **Other**

Auto-calculate Emissions? (Y/N): **No**

Primary Control Equipment Description: **Fabric Filter Low Temperature**

Year Installed (Primary): **1998**

Secondary Control Equipment Description: **No Control Method**

Year Installed (Secondary):

Control System Capture Efficiency:

Control Device Efficiency:

Overall Device Efficiency: **99.90**

Annual Adjustment Factor: **0.00**

Overall Efficiency Method: **Not applicable**

Emissions Factor:

Emissions Factor Units:

Factor Controlled? (Y/N):

Emissions Factor Operating Rate:

Emissions Factor Operating Rate Units:

Emissions [tons/yr]: **25.33**

Supporting Emissions Calculation Data:

See "2003 FER calcs.xls". Stack emissions from the baghouse associated with this emission unit and F004, P007, F009 are reported with this unit.

SCC ID: **3-04-003-31** Pollutant ID: **Lead**

Emissions Method Description: **Other**

Auto-calculate Emissions? (Y/N): **No**

Primary Control Equipment Description: **Fabric Filter Low Temperature**

Year Installed (Primary): **1998**

Secondary Control Equipment Description: **No Control Method**

Year Installed (Secondary):

Control System Capture Efficiency:

Control Device Efficiency:

Overall Device Efficiency: **99.90**

Annual Adjustment Factor: **0.00**

Overall Efficiency Method: **Not applicable**

Emissions Factor:

Emissions Factor Units:

Factor Controlled? (Y/N):

Emissions Factor Operating Rate:

Emissions Factor Operating Rate Units:

Emissions [tons/yr]: **0.00**

Supporting Emissions Calculation Data:

See "2003 FER calcs.xls".

6. Emissions information: (continued)

SCC ID: **3-04-003-31** Pollutant ID: **Particulate Matter**

Emissions Method Description: **Other**

Auto-calculate Emissions? (Y/N): **No**

Primary Control Equipment Description: **Fabric Filter Low Temperature**

Year Installed (Primary): **1998**

Secondary Control Equipment Description: **No Control Method**

Year Installed (Secondary):

Control System Capture Efficiency:

Control Device Efficiency:

Overall Device Efficiency: **99.99**

Annual Adjustment Factor: **0.00**

Overall Efficiency Method: **Not applicable**

Emissions Factor:

Emissions Factor Units:

Factor Controlled? (Y/N):

Emissions Factor Operating Rate:

Emissions Factor Operating Rate Units:

Emissions [tons/yr]: **25.35**

Supporting Emissions Calculation Data:

See "2003 FER calcs.xls". Stack emissions from the baghouse associated with this emission unit and F004, P007, F009 are reported with this unit.

SCC ID: **3-04-003-31** Pollutant ID: **Volatile organic compounds**

Emissions Method Description: **Other**

Auto-calculate Emissions? (Y/N): **No**

Primary Control Equipment Description: **No Control Method**

Year Installed (Primary):

Secondary Control Equipment Description: **No Control Method**

Year Installed (Secondary):

Control System Capture Efficiency:

Control Device Efficiency:

Overall Device Efficiency: **0.00**

Annual Adjustment Factor: **0.00**

Overall Efficiency Method: **Not applicable**

Emissions Factor:

Emissions Factor Units:

Factor Controlled? (Y/N):

Emissions Factor Operating Rate:

Emissions Factor Operating Rate Units:

Emissions [tons/yr]: **2.49**

Supporting Emissions Calculation Data:

See "2003 FER calcs.xls".

7. Summary for all SCC IDs:

SCC ID	PART	SO2	NOx	CO	OC	VOC	Hg	Pb	As	Bz
3-04-003-31	25.35	0	0	2.08	2.49	2.49	0	0	0	0
Totals:	25.35	0	0	2.08	2.49	2.49	0	0	0	0

Schedule

8. Boiler design capacity/heat input: **0.00** (MMBtu/hr)

9. Space heat: **0.00** (%)

10. Annual throughput:

December - February: **25.00** (%)
March - May: **25.00** (%)
June - August: **25.00** (%)
September - November: **25.00** (%)

11. Normal operating schedule

Hours/day: **8**
Days/week: **5**
Weeks/year: **50**

12. Peak ozone season daily emissions rate:

VOC: **13.530** (lbs/day)
NOx: **0.000** (lbs/day)

☒ **Autocalculated**

Inventory

13. Construction date: **6/64**

14. Modification date: **6/64**

15. Shutdown date:

16. Emissions unit comments (optional):

17. Federally-enforceable operating restrictions:

Point Information

18. Emissions point centroid location:

○ UTM	Zone	Vertical	Horizontal	● Lat/Long		Degrees	Minutes	Seconds
	17	**4452.61**	**426.75**		Latitude:	**40**	**14**	**49**
					Longitude:	**81**	**51**	**40**

19. Associated emissions egress point:

Emissions Egress Point ID: **03F004.B6**

Emissions Egress Point Type: **Vertical**
Geographical Preference: **Lat/Long**
UTM Zone: **17**
UTM Vertical: **4,452.67**
UTM Horizontal: **426.76**
Longitude: **81**
Longitude: **51**
Longitude: **42**
Latitude: **40**
Latitude: **14**
Latitude: **51**
Continuous Emissions Recorder? (Y/N): **No**
GEP Building Height [ft]: **42.00**
GEP Building Length [ft]: **630.00**
GEP Building Width [ft]: **350.00**

Shape: **Round**
Emissions Egress Point Cross Sectional Area [sq ft]: **20**
Emissions Egress Point Height [ft]: **11.25**
Emissions Egress Point Diameter [ft]: **5.15**
Exit Gas Temperature at Maximum Operation [° F]: **150**
Exit Gas Temperature at Average Operation [° F]: **120**
Exit Gas Flow at Maximum Operation [acfm]: **96,000**
Exit Gas Flow at Average Operation [acfm]: **96,000**
Emission Egress Point Base Elevation [ft]: **764**
Release Height [ft]:
Plume Temperature [° F]:
Area of Emissions [sq ft]:

Confidential Claims

20. Complete the table below:

Confidential item:	Basis for confidentiality claim:

State of Ohio Environmental Protection Agency

Facility Name: **Clow Water Systems Company**
Facility ID: **06-16-01-0006**
Title: **2003-F009**

Emissions Reporting Form: Emissions Unit Information

General Information

1. Emissions form(s): ☒ **Emissions fee report** ☐ Emissions statement ☒ **Emissions inventory**

2. Reporting period: **2003**

3. OEPA ID(s): **POURING CIRCUIT (F009)**

4. Annual operating hours: **2,023**

SCC Information

5. Select an SCC ID and complete the table below:

SCC ID: **3-04-003-20**

User Description for SCC (optional):

SCC operating rate units: **Tons of Metal Charged**

SCC Annual Operating Rate [SCC Units]: **4,150.00000**

Ash [%]:

Maximum Hourly Operating Rate [SCC Units]: **5.000**

Sulfur [%]:

SCC Comments:

6. Emissions information:

SCC ID: **3-04-003-20** Pollutant ID: **Carbon monoxide**

Emissions Method Description: **Other**

Overall Efficiency Method: **Not applicable**

Auto-calculate Emissions? (Y/N): **No**

Emissions Factor:

Primary Control Equipment Description: **No Control Method**

Emissions Factor Units:

Year Installed (Primary):

Factor Controlled? (Y/N):

Secondary Control Equipment Description: **No Control Method**

Emissions Factor Operating Rate:

Year Installed (Secondary):

Emissions Factor Operating Rate Units:

Control System Capture Efficiency:

Control Device Efficiency:

Overall Device Efficiency: **0.00**

Annual Adjustment Factor: **0.00**

Emissions [tons/yr]: **6.20**

Supporting Emissions Calculation Data:

See "2003 FER calcs.xls".

6. Emissions information: (continued)

SCC ID: **3-04-003-20** Pollutant ID: **Nitrogen oxides**

Emissions Method Description: **Other**

Auto-calculate Emissions? (Y/N): **No**

Primary Control Equipment Description: **No Control Method**

Year Installed (Primary):

Secondary Control Equipment Description: **No Control Method**

Year Installed (Secondary):

Control System Capture Efficiency:

Control Device Efficiency:

Overall Device Efficiency: **0.00**

Annual Adjustment Factor: **0.00**

Supporting Emissions Calculation Data:

See "2003 FER calcs.xls".

Overall Efficiency Method: **Not applicable**

Emissions Factor:

Emissions Factor Units:

Factor Controlled? (Y/N):

Emissions Factor Operating Rate:

Emissions Factor Operating Rate Units:

Emissions [tons/yr]: **0.02**

SCC ID: **3-04-003-20** Pollutant ID: **Organic compounds**

Emissions Method Description: **Other**

Auto-calculate Emissions? (Y/N): **No**

Primary Control Equipment Description: **No Control Method**

Year Installed (Primary):

Secondary Control Equipment Description: **No Control Method**

Year Installed (Secondary):

Control System Capture Efficiency:

Control Device Efficiency:

Overall Device Efficiency: **0.00**

Annual Adjustment Factor: **0.00**

Supporting Emissions Calculation Data:

See "2003 FER calcs.xls".

Overall Efficiency Method: **Not applicable**

Emissions Factor:

Emissions Factor Units:

Factor Controlled? (Y/N):

Emissions Factor Operating Rate:

Emissions Factor Operating Rate Units:

Emissions [tons/yr]: **0.42**

6. Emissions information: (continued)

SCC ID: **3-04-003-20** Pollutant ID: **PM =< 10 microns**

Emissions Method Description: **Other**

Auto-calculate Emissions? (Y/N): **No**

Primary Control Equipment Description: **Fabric Filter Low Temperature**

Year Installed (Primary): **1998**

Secondary Control Equipment Description: **No Control Method**

Year Installed (Secondary):

Control System Capture Efficiency:

Control Device Efficiency:

Overall Device Efficiency: **99.90**

Annual Adjustment Factor: **0.00**

Overall Efficiency Method: **Estimated**

Emissions Factor:

Emissions Factor Units:

Factor Controlled? (Y/N):

Emissions Factor Operating Rate:

Emissions Factor Operating Rate Units:

Emissions [tons/yr]: **1.09**

Supporting Emissions Calculation Data:

See "2003 FER calcs.xls". Stack emissions from the baghouse associated with this emission unit are reported with F007.

SCC ID: **3-04-003-20** Pollutant ID: **PM =< 2.5 microns**

Emissions Method Description: **Other**

Auto-calculate Emissions? (Y/N): **No**

Primary Control Equipment Description: **Fabric Filter Low Temperature**

Year Installed (Primary): **1998**

Secondary Control Equipment Description: **No Control Method**

Year Installed (Secondary):

Control System Capture Efficiency:

Control Device Efficiency:

Overall Device Efficiency: **99.90**

Annual Adjustment Factor: **0.00**

Overall Efficiency Method: **Estimated**

Emissions Factor:

Emissions Factor Units:

Factor Controlled? (Y/N):

Emissions Factor Operating Rate:

Emissions Factor Operating Rate Units:

Emissions [tons/yr]: **1.33**

Supporting Emissions Calculation Data:

See "2003 FER calcs.xls". Stack emissions from the baghouse associated with this emission unit are reported with F007.

6. Emissions information: (continued)

SCC ID: **3-04-003-20** Pollutant ID: **Lead**

Emissions Method Description: **Other**

Auto-calculate Emissions? (Y/N): **No**

Primary Control Equipment Description: **Fabric Filter Low Temperature**

Year Installed (Primary): **1998**

Secondary Control Equipment Description: **No Control Method**

Year Installed (Secondary):

Control System Capture Efficiency:

Control Device Efficiency:

Overall Device Efficiency: **99.90**

Annual Adjustment Factor: **0.00**

Overall Efficiency Method: **Estimated**

Emissions Factor:

Emissions Factor Units:

Factor Controlled? (Y/N):

Emissions Factor Operating Rate:

Emissions Factor Operating Rate Units:

Emissions [tons/yr]: **0.00**

Supporting Emissions Calculation Data:

See "2003 FER calcs.xls".

SCC ID: **3-04-003-20** Pollutant ID: **Particulate Matter**

Emissions Method Description: **Other**

Auto-calculate Emissions? (Y/N): **No**

Primary Control Equipment Description: **Fabric Filter Low Temperature**

Year Installed (Primary): **1998**

Secondary Control Equipment Description: **No Control Method**

Year Installed (Secondary):

Control System Capture Efficiency:

Control Device Efficiency:

Overall Device Efficiency: **99.90**

Annual Adjustment Factor: **0.00**

Overall Efficiency Method: **Estimated**

Emissions Factor:

Emissions Factor Units:

Factor Controlled? (Y/N):

Emissions Factor Operating Rate:

Emissions Factor Operating Rate Units:

Emissions [tons/yr]: **1.33**

Supporting Emissions Calculation Data:

See "2003 FER calcs.xls". Stack emissions from the baghouse associated with this emission unit are reported with F007.

6. Emissions information: (continued)

SCC ID: **3-04-003-20** Pollutant ID: **Sulfur dioxide**

Emissions Method Description: **Other**

Auto-calculate Emissions? (Y/N): **No**

Primary Control Equipment Description: **No Control Method**

Year Installed (Primary):

Secondary Control Equipment Description: **No Control Method**

Year Installed (Secondary):

Control System Capture Efficiency:

Control Device Efficiency:

Overall Device Efficiency: **0.00**

Annual Adjustment Factor: **0.00**

Overall Efficiency Method: **Not applicable**

Emissions Factor:

Emissions Factor Units:

Factor Controlled? (Y/N):

Emissions Factor Operating Rate:

Emissions Factor Operating Rate Units:

Emissions [tons/yr]: **0.04**

Supporting Emissions Calculation Data:

See "2003 FER calcs.xls".

SCC ID: **3-04-003-20** Pollutant ID: **Volatile organic compounds**

Emissions Method Description: **Other**

Auto-calculate Emissions? (Y/N): **No**

Primary Control Equipment Description: **No Control Method**

Year Installed (Primary):

Secondary Control Equipment Description: **No Control Method**

Year Installed (Secondary):

Control System Capture Efficiency:

Control Device Efficiency:

Overall Device Efficiency: **0.00**

Annual Adjustment Factor: **0.00**

Overall Efficiency Method: **Not applicable**

Emissions Factor:

Emissions Factor Units:

Factor Controlled? (Y/N):

Emissions Factor Operating Rate:

Emissions Factor Operating Rate Units:

Emissions [tons/yr]: **0.42**

Supporting Emissions Calculation Data:

See "2003 FER calcs.xls".

7. Summary for all SCC IDs:

SCC ID	PART	SO2	NOx	CO	OC	VOC	Hg	Pb	As	Bz
3-04-003-20	1.33	0.04	0.02	6.2	0.42	0.42	0	0	0	0
Totals:	1.33	0.04	0.02	6.2	0.42	0.42	0	0	0	0

Schedule

8. Boiler design capacity/heat input: **0.00** (MMBtu/hr)

9. Space heat: **0.00** (%)

10. Annual throughput:

December - February: **25.00** (%)
March - May: **25.00** (%)
June - August: **25.00** (%)
September - November: **25.00** (%)

11. Normal operating schedule

Hours/day: **8**
Days/week: **5**
Weeks/year: **50**

12. Peak ozone season daily emissions rate:

VOC: **2.280** (lbs/day)
NOx: **0.110** (lbs/day)
☒ **Autocalculated**

Inventory

13. Construction date: **6/36**

14. Modification date: **6/89**

15. Shutdown date:

16. Emissions unit comments (optional):

17. Federally-enforceable operating restrictions:

Point Information

18. Emissions point centroid location:

○ UTM	Zone	Vertical	Horizontal	● Lat/Long		Degrees	Minutes	Seconds
	17	4452.60	426.78		Latitude:	40	14	49
					Longitude:	81	51	39

19. Associated emissions egress point:

Emissions Egress Point ID: **03F004.B6**

Emissions Egress Point Type: **Vertical**
Geographical Preference: **Lat/Long**
UTM Zone: **17**
UTM Vertical: **4,452.60**
UTM Horizontal: **426.78**
Longitude: **81**
Longitude: **51**
Longitude: **39**
Latitude: **40**
Latitude: **14**
Latitude: **49**
Continuous Emissions Recorder? (Y/N):
GEP Building Height [ft]:
GEP Building Length [ft]:
GEP Building Width [ft]:

Shape: **Round**
Emissions Egress Point Cross Sectional Area [sq ft]: **20**
Emissions Egress Point Height [ft]: **11.25**
Emissions Egress Point Diameter [ft]: **5.15**
Exit Gas Temperature at Maximum Operation [° F]: **150**
Exit Gas Temperature at Average Operation [° F]: **120**
Exit Gas Flow at Maximum Operation [acfm]: **96,000**
Exit Gas Flow at Average Operation [acfm]: **96,000**
Emission Egress Point Base Elevation [ft]: **764**
Release Height [ft]:
Plume Temperature [° F]:
Area of Emissions [sq ft]:

19. Associated emissions egress point: (continued)

Emissions Egress Point ID: 37FAN .B8

Emissions Egress Point Type: **Vertical**
Geographical Preference: **Lat/Long**
UTM Zone: **17**
UTM Vertical: **4,452.64**
UTM Horizontal: **426.78**
Longitude: **81**
Longitude: **51**
Longitude: **39**
Latitude: **40**
Latitude: **14**
Latitude: **50**
Continuous Emissions Recorder? (Y/N): **No**
GEP Building Height [ft]: **42.00**
GEP Building Length [ft]: **630.00**
GEP Building Width [ft]: **350.00**

Shape: **Round**
Emissions Egress Point Cross Sectional Area [sq ft]: **27**
Emissions Egress Point Height [ft]: **50.54**
Emissions Egress Point Diameter [ft]: **5.92**
Exit Gas Temperature at Maximum Operation [° F]: **70**
Exit Gas Temperature at Average Operation [° F]: **70**
Exit Gas Flow at Maximum Operation [acfm]: **54,000**
Exit Gas Flow at Average Operation [acfm]: **54,000**
Emission Egress Point Base Elevation [ft]: **765**
Release Height [ft]:
Plume Temperature [° F]:
Area of Emissions [sq ft]:

Emissions Egress Point ID: 38FAN .B8

Emissions Egress Point Type: **Vertical**
Geographical Preference: **Lat/Long**
UTM Zone: **17**
UTM Vertical: **4,452.60**
UTM Horizontal: **426.78**
Longitude: **81**
Longitude: **51**
Longitude: **39**
Latitude: **40**
Latitude: **14**
Latitude: **49**
Continuous Emissions Recorder? (Y/N):
GEP Building Height [ft]:
GEP Building Length [ft]:
GEP Building Width [ft]:

Shape: **Round**
Emissions Egress Point Cross Sectional Area [sq ft]: **27**
Emissions Egress Point Height [ft]: **62.36**
Emissions Egress Point Diameter [ft]: **5.92**
Exit Gas Temperature at Maximum Operation [° F]: **70**
Exit Gas Temperature at Average Operation [° F]: **70**
Exit Gas Flow at Maximum Operation [acfm]: **54,000**
Exit Gas Flow at Average Operation [acfm]: **54,000**
Emission Egress Point Base Elevation [ft]: **765**
Release Height [ft]:
Plume Temperature [° F]:
Area of Emissions [sq ft]:

19. Associated emissions egress point: (continued)

Emissions Egress Point ID: **39FAN .B8**

Emissions Egress Point Type: **Vertical**
Geographical Preference: **Lat/Long**
UTM Zone: **17**
UTM Vertical: **4,452.60**
UTM Horizontal: **426.78**
Longitude: **81**
Longitude: **51**
Longitude: **39**
Latitude: **40**
Latitude: **14**
Latitude: **49**
Continuous Emissions Recorder? (Y/N):
GEP Building Height [ft]:
GEP Building Length [ft]:
GEP Building Width [ft]:

Shape: **Round**
Emissions Egress Point Cross Sectional Area [sq ft]: **27**
Emissions Egress Point Height [ft]: **40.80**
Emissions Egress Point Diameter [ft]: **5.92**
Exit Gas Temperature at Maximum Operation [° F]: **70**
Exit Gas Temperature at Average Operation [° F]: **70**
Exit Gas Flow at Maximum Operation [acfm]: **54,000**
Exit Gas Flow at Average Operation [acfm]: **54,000**
Emission Egress Point Base Elevation [ft]: **765**
Release Height [ft]:
Plume Temperature [° F]:
Area of Emissions [sq ft]:

Emissions Egress Point ID: **43FAN .B9**

Emissions Egress Point Type: **Vertical**
Geographical Preference: **Lat/Long**
UTM Zone: **17**
UTM Vertical: **4,452.60**
UTM Horizontal: **426.78**
Longitude: **81**
Longitude: **51**
Longitude: **39**
Latitude: **40**
Latitude: **14**
Latitude: **49**
Continuous Emissions Recorder? (Y/N):
GEP Building Height [ft]:
GEP Building Length [ft]:
GEP Building Width [ft]:

Shape: **Round**
Emissions Egress Point Cross Sectional Area [sq ft]: **27**
Emissions Egress Point Height [ft]: **55.27**
Emissions Egress Point Diameter [ft]: **5.92**
Exit Gas Temperature at Maximum Operation [° F]: **70**
Exit Gas Temperature at Average Operation [° F]: **70**
Exit Gas Flow at Maximum Operation [acfm]: **54,000**
Exit Gas Flow at Average Operation [acfm]: **54,000**
Emission Egress Point Base Elevation [ft]: **765**
Release Height [ft]:
Plume Temperature [° F]:
Area of Emissions [sq ft]:

Confidential Claims

20. Complete the table below:

Confidential item:

Basis for confidentiality claim:

State of Ohio Environmental Protection Agency

Facility Name: **Clow Water Systems Company**
Facility ID: **06-16-01-0006**
Title: **2003-F010**

Emissions Reporting Form: Emissions Unit Information

General Information

1. Emissions form(s): ☒ **Emissions fee report** ☐ Emissions statement ☒ **Emissions inventory**

2. Reporting period: **2003**

3. OEPA ID(s): **POURING BMM (F010)**

4. Annual operating hours: **2,023**

SCC Information

5. Select an SCC ID and complete the table below:

SCC ID: **3-04-003-20**

User Description for SCC (optional):

SCC operating rate units: **Tons of Metal Charged**

SCC Annual Operating Rate [SCC Units]: **3,910.00000**

Ash [%]:

Maximum Hourly Operating Rate [SCC Units]: **2.560**

Sulfur [%]:

SCC Comments:

6. Emissions information:

SCC ID: **3-04-003-20** Pollutant ID: **Carbon monoxide**

Emissions Method Description: **Other**

Overall Efficiency Method: **Not applicable**

Auto-calculate Emissions? (Y/N): **No**

Emissions Factor:

Emissions Factor Units:

Primary Control Equipment Description: **No Control Method**

Year Installed (Primary):

Factor Controlled? (Y/N):

Secondary Control Equipment Description: **No Control Method**

Emissions Factor Operating Rate:

Year Installed (Secondary):

Emissions Factor Operating Rate Units:

Control System Capture Efficiency:

Control Device Efficiency:

Overall Device Efficiency: **0.00**

Annual Adjustment Factor: **0.00**

Emissions [tons/yr]: **5.85**

Supporting Emissions Calculation Data:

See "2003 FER calcs.xls"

6. Emissions information: (continued)

SCC ID: **3-04-003-20** Pollutant ID: **Nitrogen oxides**

Emissions Method Description: **Other**

Auto-calculate Emissions? (Y/N): **No**

Primary Control Equipment Description: **No Control Method**

Year Installed (Primary):

Secondary Control Equipment Description: **No Control Method**

Year Installed (Secondary):

Control System Capture Efficiency:

Control Device Efficiency:

Overall Device Efficiency: **0.00**

Annual Adjustment Factor: **0.00**

Supporting Emissions Calculation Data:

See "2003 FER calcs.xls"

Overall Efficiency Method: **Not applicable**

Emissions Factor:

Emissions Factor Units:

Factor Controlled? (Y/N):

Emissions Factor Operating Rate:

Emissions Factor Operating Rate Units:

Emissions [tons/yr]: **0.02**

SCC ID: **3-04-003-20** Pollutant ID: **Organic compounds**

Emissions Method Description: **Other**

Auto-calculate Emissions? (Y/N): **No**

Primary Control Equipment Description: **No Control Method**

Year Installed (Primary):

Secondary Control Equipment Description: **No Control Method**

Year Installed (Secondary):

Control System Capture Efficiency:

Control Device Efficiency:

Overall Device Efficiency: **0.00**

Annual Adjustment Factor: **0.00**

Supporting Emissions Calculation Data:

See "2003 FER calcs.xls"

Overall Efficiency Method: **Not applicable**

Emissions Factor:

Emissions Factor Units:

Factor Controlled? (Y/N):

Emissions Factor Operating Rate:

Emissions Factor Operating Rate Units:

Emissions [tons/yr]: **0.39**

6. Emissions information: (continued)

SCC ID: **3-04-003-20** Pollutant ID: **PM =< 10 microns**

Emissions Method Description: **Other**

Auto-calculate Emissions? (Y/N): **No**

Primary Control Equipment Description: **Gravity Collector Low Efficiency**

Year Installed (Primary): **1950**

Secondary Control Equipment Description: **No Control Method**

Year Installed (Secondary):

Control System Capture Efficiency:

Control Device Efficiency:

Overall Device Efficiency: **50.00**

Annual Adjustment Factor: **0.00**

Overall Efficiency Method: **Estimated**

Emissions Factor:

Emissions Factor Units:

Factor Controlled? (Y/N):

Emissions Factor Operating Rate:

Emissions Factor Operating Rate Units:

Emissions [tons/yr]: **0.01**

Supporting Emissions Calculation Data:

See "2003 FER calcs.xls". Emissions from the baghouse associated with this emission unit are reported with F016.

SCC ID: **3-04-003-20** Pollutant ID: **PM =< 2.5 microns**

Emissions Method Description: **Other**

Auto-calculate Emissions? (Y/N): **No**

Primary Control Equipment Description: **Gravity Collector Low Efficiency**

Year Installed (Primary): **1950**

Secondary Control Equipment Description: **No Control Method**

Year Installed (Secondary):

Control System Capture Efficiency:

Control Device Efficiency:

Overall Device Efficiency: **50.00**

Annual Adjustment Factor: **0.00**

Overall Efficiency Method: **Estimated**

Emissions Factor:

Emissions Factor Units:

Factor Controlled? (Y/N):

Emissions Factor Operating Rate:

Emissions Factor Operating Rate Units:

Emissions [tons/yr]: **0.01**

Supporting Emissions Calculation Data:

See "2003 FER calcs.xls". Emissions from the baghouse associated with this emission unit are reported with F016.

6. Emissions information: (continued)

SCC ID: **3-04-003-20** Pollutant ID: **Particulate Matter**

Emissions Method Description: **Other**

Auto-calculate Emissions? (Y/N): **No**

Primary Control Equipment Description: **Gravity Collector Low Efficiency**

Year Installed (Primary): **1950**

Secondary Control Equipment Description: **No Control Method**

Year Installed (Secondary):

Control System Capture Efficiency:

Control Device Efficiency:

Overall Device Efficiency: **50.00**

Annual Adjustment Factor: **0.00**

Overall Efficiency Method: **Estimated**

Emissions Factor:

Emissions Factor Units:

Factor Controlled? (Y/N):

Emissions Factor Operating Rate:

Emissions Factor Operating Rate Units:

Emissions [tons/yr]: **0.01**

Supporting Emissions Calculation Data:

See "2003 FER calcs.xls". Emissions from the baghouse associated with this emission unit are reported with F016.

SCC ID: **3-04-003-20** Pollutant ID: **Sulfur dioxide**

Emissions Method Description: **Other**

Auto-calculate Emissions? (Y/N): **No**

Primary Control Equipment Description: **No Control Method**

Year Installed (Primary):

Secondary Control Equipment Description: **No Control Method**

Year Installed (Secondary):

Control System Capture Efficiency:

Control Device Efficiency:

Overall Device Efficiency: **0.00**

Annual Adjustment Factor: **0.00**

Overall Efficiency Method: **Not applicable**

Emissions Factor:

Emissions Factor Units:

Factor Controlled? (Y/N):

Emissions Factor Operating Rate:

Emissions Factor Operating Rate Units:

Emissions [tons/yr]: **0.04**

Supporting Emissions Calculation Data:

See "2003 FER calcs.xls"

6. Emissions information: (continued)

SCC ID: **3-04-003-20** Pollutant ID: **Volatile organic compounds**

Emissions Method Description: **Other**

Auto-calculate Emissions? (Y/N): **No**

Primary Control Equipment Description: **No Control Method**

Year Installed (Primary):

Secondary Control Equipment Description: **No Control Method**

Year Installed (Secondary):

Control System Capture Efficiency:

Control Device Efficiency:

Overall Device Efficiency: **0.00**

Annual Adjustment Factor: **0.00**

Supporting Emissions Calculation Data:

See "2003 FER calcs.xls"

Overall Efficiency Method: **Not applicable**

Emissions Factor:

Emissions Factor Units:

Factor Controlled? (Y/N):

Emissions Factor Operating Rate:

Emissions Factor Operating Rate Units:

Emissions [tons/yr]: **0.39**

7. Summary for all SCC IDs:

SCC ID	PART	SO2	NOx	CO	OC	VOC	Hg	Pb	As	Bz
3-04-003-20	0.01	0.04	0.02	5.85	0.39	0.39	0	0	0	0
Totals:	0.01	0.04	0.02	5.85	0.39	0.39	0	0	0	0

Schedule

8. Boiler design capacity/heat input: **0.00** (MMBtu/hr)

9. Space heat: **0.00** (%)

10. Annual throughput:

December - February: **25.00** (%)

March - May: **25.00** (%)

June - August: **25.00** (%)

September - November: **25.00** (%)

11. Normal operating schedule

Hours/day: **8**

Days/week: **5**

Weeks/year: **50**

12. Peak ozone season daily emissions rate:

VOC: **2.120** (lbs/day)

NOx: **0.110** (lbs/day)

☒ **Autocalculated**

Inventory

13. Construction date: **6/36**

14. Modification date: **6/89**

15. Shutdown date:

16. Emissions unit comments (optional):

17. Federally-enforceable operating restrictions:

Point Information

18. Emissions point centroid location:

○ UTM	Zone	Vertical	Horizontal	● Lat/Long		Degrees	Minutes	Seconds
	17	4452.57	426.80		Latitude:	40	14	48
					Longitude:	81	51	38

19. Associated emissions egress point:

Emissions Egress Point ID: 37FAN .B8

Emissions Egress Point Type: **Vertical**
Geographical Preference: **Lat/Long**
UTM Zone: **17**
UTM Vertical: **4,452.57**
UTM Horizontal: **426.80**
Longitude: **81**
Longitude: **51**
Longitude: **38**
Latitude: **40**
Latitude: **14**
Latitude: **48**
Continuous Emissions Recorder? (Y/N):
GEP Building Height [ft]:
GEP Building Length [ft]:
GEP Building Width [ft]:

Shape: **Round**
Emissions Egress Point Cross Sectional Area [sq ft]: **27**
Emissions Egress Point Height [ft]: **50.54**
Emissions Egress Point Diameter [ft]: **5.92**
Exit Gas Temperature at Maximum Operation [° F]: **70**
Exit Gas Temperature at Average Operation [° F]: **70**
Exit Gas Flow at Maximum Operation [acfm]: **54,000**
Exit Gas Flow at Average Operation [acfm]: **54,000**
Emission Egress Point Base Elevation [ft]: **765**
Release Height [ft]:
Plume Temperature [° F]:
Area of Emissions [sq ft]:

Emissions Egress Point ID: 38FAN .B8

Emissions Egress Point Type: **Vertical**
Geographical Preference: **Lat/Long**
UTM Zone: **17**
UTM Vertical: **4,452.57**
UTM Horizontal: **426.80**
Longitude: **81**
Longitude: **51**
Longitude: **38**
Latitude: **40**
Latitude: **14**
Latitude: **48**
Continuous Emissions Recorder? (Y/N):
GEP Building Height [ft]:
GEP Building Length [ft]:
GEP Building Width [ft]:

Shape: **Round**
Emissions Egress Point Cross Sectional Area [sq ft]: **27**
Emissions Egress Point Height [ft]: **62.36**
Emissions Egress Point Diameter [ft]: **5.92**
Exit Gas Temperature at Maximum Operation [° F]: **70**
Exit Gas Temperature at Average Operation [° F]: **70**
Exit Gas Flow at Maximum Operation [acfm]: **54,000**
Exit Gas Flow at Average Operation [acfm]: **54,000**
Emission Egress Point Base Elevation [ft]: **765**
Release Height [ft]:
Plume Temperature [° F]:
Area of Emissions [sq ft]:

19. Associated emissions egress point: (continued)

Emissions Egress Point ID: 39FAN .B8

Emissions Egress Point Type: **Vertical**
Geographical Preference: **Lat/Long**
UTM Zone: **17**
UTM Vertical: **4,452.57**
UTM Horizontal: **426.80**
Longitude: **81**
Longitude: **51**
Longitude: **38**
Latitude: **40**
Latitude: **14**
Latitude: **48**
Continuous Emissions Recorder? (Y/N):
GEP Building Height [ft]:
GEP Building Length [ft]:
GEP Building Width [ft]:

Shape: **Round**
Emissions Egress Point Cross Sectional Area [sq ft]: **27**
Emissions Egress Point Height [ft]: **40.80**
Emissions Egress Point Diameter [ft]: **5.92**
Exit Gas Temperature at Maximum Operation [° F]: **70**
Exit Gas Temperature at Average Operation [° F]: **70**
Exit Gas Flow at Maximum Operation [acfm]: **54,000**
Exit Gas Flow at Average Operation [acfm]: **54,000**
Emission Egress Point Base Elevation [ft]: **765**
Release Height [ft]:
Plume Temperature [° F]:
Area of Emissions [sq ft]:

Emissions Egress Point ID: 43FAN .B9

Emissions Egress Point Type: **Vertical**
Geographical Preference: **Lat/Long**
UTM Zone: **17**
UTM Vertical: **4,452.57**
UTM Horizontal: **426.80**
Longitude: **81**
Longitude: **51**
Longitude: **38**
Latitude: **40**
Latitude: **14**
Latitude: **48**
Continuous Emissions Recorder? (Y/N): **No**
GEP Building Height [ft]: **42.00**
GEP Building Length [ft]: **630.00**
GEP Building Width [ft]: **350.00**

Shape: **Round**
Emissions Egress Point Cross Sectional Area [sq ft]: **27**
Emissions Egress Point Height [ft]: **55.27**
Emissions Egress Point Diameter [ft]: **5.92**
Exit Gas Temperature at Maximum Operation [° F]: **70**
Exit Gas Temperature at Average Operation [° F]: **70**
Exit Gas Flow at Maximum Operation [acfm]: **54,000**
Exit Gas Flow at Average Operation [acfm]: **54,000**
Emission Egress Point Base Elevation [ft]: **765**
Release Height [ft]:
Plume Temperature [° F]:
Area of Emissions [sq ft]:

19. Associated emissions egress point: (continued)

Emissions Egress Point ID: **63FAN.B9**

Emissions Egress Point Type: **Vertical**
Geographical Preference: **Lat/Long**
UTM Zone: **17**
UTM Vertical: **4,452.54**
UTM Horizontal: **426.80**
Longitude: **81**
Longitude: **51**
Longitude: **38**
Latitude: **40**
Latitude: **14**
Latitude: **47**
Continuous Emissions Recorder? (Y/N): **No**
GEP Building Height [ft]: **42.00**
GEP Building Length [ft]: **630.00**
GEP Building Width [ft]: **350.00**

Shape: **Round**
Emissions Egress Point Cross Sectional Area [sq ft]: **24**
Emissions Egress Point Height [ft]: **28.30**
Emissions Egress Point Diameter [ft]: **5.58**
Exit Gas Temperature at Maximum Operation [° F]: **120**
Exit Gas Temperature at Average Operation [° F]: **90**
Exit Gas Flow at Maximum Operation [acfm]: **96,000**
Exit Gas Flow at Average Operation [acfm]: **96,000**
Emission Egress Point Base Elevation [ft]: **762**
Release Height [ft]:
Plume Temperature [° F]:
Area of Emissions [sq ft]:

Confidential Claims

20. Complete the table below:

Confidential item:

Basis for confidentiality claim:

State of Ohio Environmental Protection Agency

Facility Name: **Clow Water Systems Company**
Facility ID: **06-16-01-0006**
Title: **2003-F011**

Emissions Reporting Form: Emissions Unit Information

General Information

1. Emissions form(s): ☒ **Emissions fee report** ☐ Emissions statement ☒ **Emissions inventory**

2. Reporting period: **2003**

3. OEPA ID(s): **FITTING GRINDING (F011)**

4. Annual operating hours: **2,023**

SCC Information

5. Select an SCC ID and complete the table below:

SCC ID: **3-04-003-60**

User Description for SCC (optional):

SCC operating rate units: **Tons of Metal Charged**

SCC Annual Operating Rate [SCC Units]: **5,959.00000**

Ash [%]:

Maximum Hourly Operating Rate [SCC Units]: **12.000**

Sulfur [%]:

SCC Comments:

6. Emissions information:

SCC ID: **3-04-003-60** Pollutant ID: **PM =< 10 microns**

Emissions Method Description: **Other**

Overall Efficiency Method: **Not applicable**

Auto-calculate Emissions? (Y/N): **No**

Emissions Factor:

Primary Control Equipment Description: **No Control Method**

Emissions Factor Units:

Year Installed (Primary):

Factor Controlled? (Y/N):

Secondary Control Equipment Description: **No Control Method**

Emissions Factor Operating Rate:

Year Installed (Secondary):

Emissions Factor Operating Rate Units:

Control System Capture Efficiency:

Control Device Efficiency:

Overall Device Efficiency: **0.00**

Annual Adjustment Factor: **0.00**

Emissions [tons/yr]: **0.00**

Supporting Emissions Calculation Data:

See "2003 FER calcs.xls".

6. Emissions information: (continued)

SCC ID: **3-04-003-60** Pollutant ID: **PM =< 2.5 microns**

Emissions Method Description: **Other**

Auto-calculate Emissions? (Y/N): **No**

Primary Control Equipment Description: **No Control Method**

Year Installed (Primary):

Secondary Control Equipment Description: **No Control Method**

Year Installed (Secondary):

Control System Capture Efficiency:

Control Device Efficiency:

Overall Device Efficiency: **0.00**

Annual Adjustment Factor: **0.00**

Supporting Emissions Calculation Data:

See "2003 FER calcs.xls".

Overall Efficiency Method: **Not applicable**

Emissions Factor:

Emissions Factor Units:

Factor Controlled? (Y/N):

Emissions Factor Operating Rate:

Emissions Factor Operating Rate Units:

Emissions [tons/yr]: **0.00**

SCC ID: **3-04-003-60** Pollutant ID: **Particulate Matter**

Emissions Method Description: **Other**

Auto-calculate Emissions? (Y/N): **No**

Primary Control Equipment Description: **No Control Method**

Year Installed (Primary):

Secondary Control Equipment Description: **No Control Method**

Year Installed (Secondary):

Control System Capture Efficiency:

Control Device Efficiency:

Overall Device Efficiency: **0.00**

Annual Adjustment Factor: **0.00**

Supporting Emissions Calculation Data:

See "2003 FER calcs.xls".

Overall Efficiency Method: **Not applicable**

Emissions Factor:

Emissions Factor Units:

Factor Controlled? (Y/N):

Emissions Factor Operating Rate:

Emissions Factor Operating Rate Units:

Emissions [tons/yr]: **1.43**

7. Summary for all SCC IDs:

SCC ID	PART	SO2	NOx	CO	OC	VOC	Hg	Pb	As	Bz
3-04-003-60	1.43	0	0	0	0	0	0	0	0	0
Totals:	1.43	0	0	0	0	0	0	0	0	0

Schedule

8. Boiler design capacity/heat input: **0.00** (MMBtu/hr)

9. Space heat: **0.00** (%)

10. Annual throughput:

December - February: **25.00** (%)
March - May: **25.00** (%)
June - August: **25.00** (%)
September - November: **25.00** (%)

11. Normal operating schedule

Hours/day: **8**
Days/week: **5**
Weeks/year: **50**

12. Peak ozone season daily emissions rate:

VOC: **0.000** (lbs/day)
NOx: **0.000** (lbs/day)
☒ **Autocalculated**

Inventory

13. Construction date: **6/74**

14. Modification date: **6/74**

15. Shutdown date:

16. Emissions unit comments (optional):

17. Federally-enforceable operating restrictions:

Point Information

18. Emissions point centroid location:

○ UTM — Zone: **17** Vertical: **4452.51** Horizontal: **426.85**

● Lat/Long

	Degrees	Minutes	Seconds
Latitude:	**40**	**14**	**46**
Longitude:	**81**	**51**	**36**

19. Associated emissions egress point:

Emissions Egress Point ID: **M-F011.C0**

Emissions Egress Point Type: **Fugitive**
Geographical Preference: **Lat/Long**
UTM Zone: **17**
UTM Vertical: **4,452.51**
UTM Horizontal: **426.85**
Longitude: **81**
Longitude: **51**
Longitude: **36**
Latitude: **40**
Latitude: **14**
Latitude: **46**
Continuous Emissions Recorder? (Y/N): **No**
GEP Building Height [ft]: **42.00**
GEP Building Length [ft]: **630.00**
GEP Building Width [ft]: **350.00**

Shape:
Emissions Egress Point Cross Sectional Area [sq ft]:
Emissions Egress Point Height [ft]:
Emissions Egress Point Diameter [ft]:
Exit Gas Temperature at Maximum Operation [° F]:
Exit Gas Temperature at Average Operation [° F]:
Exit Gas Flow at Maximum Operation [acfm]:
Exit Gas Flow at Average Operation [acfm]:
Emission Egress Point Base Elevation [ft]:
Release Height [ft]: **6.00**
Plume Temperature [° F]: **100**
Area of Emissions [sq ft]: **5,000.00**

Confidential Claims

20. Complete the table below:

Confidential item:	Basis for confidentiality claim:

State of Ohio Environmental Protection Agency

Facility Name: **Clow Water Systems Company**
Facility ID: **06-16-01-0006**
Title: **2003-F014**

Emissions Reporting Form: Emissions Unit Information

General Information

1. Emissions form(s): ☒ **Emissions fee report** ☐ Emissions statement ☒ **Emissions inventory**

2. Reporting period: **2003**

3. OEPA ID(s): **CORE MACHINE (F014)**

4. Annual operating hours: **2,044**

SCC Information

5. Select an SCC ID and complete the table below:

SCC ID: **3-04-003-71**

User Description for SCC (optional): **Isocure sand cores**

SCC operating rate units: **Tons of Cores Produced**

SCC Annual Operating Rate [SCC Units]: **1,324.00000**

Ash [%]:

Maximum Hourly Operating Rate [SCC Units]: **3.000**

Sulfur [%]:

SCC Comments:

6. Emissions information:

SCC ID: **3-04-003-71** Pollutant ID: **Organic compounds**

Emissions Method Description: **Other**

Overall Efficiency Method: **Not applicable**

Auto-calculate Emissions? (Y/N): **No**

Emissions Factor:

Primary Control Equipment Description: **No Control Method**

Emissions Factor Units:

Year Installed (Primary):

Factor Controlled? (Y/N):

Secondary Control Equipment Description: **No Control Method**

Emissions Factor Operating Rate:

Year Installed (Secondary):

Control System Capture Efficiency:

Emissions Factor Operating Rate Units:

Control Device Efficiency:

Overall Device Efficiency: **0.00**

Annual Adjustment Factor: **0.00**

Emissions [tons/yr]: **0.45**

Supporting Emissions Calculation Data:

See "2003 FER calcs.xls".

6. Emissions information: (continued)

SCC ID: **3-04-003-71** Pollutant ID: **PM =< 10 microns**

Emissions Method Description: **Other**

Auto-calculate Emissions? (Y/N): **No**

Primary Control Equipment Description: **Fabric Filter Low Temperature**

Year Installed (Primary): **1997**

Secondary Control Equipment Description: **No Control Method**

Year Installed (Secondary):

Control System Capture Efficiency:

Control Device Efficiency:

Overall Device Efficiency: **99.00**

Annual Adjustment Factor: **0.00**

Overall Efficiency Method: **Design**

Emissions Factor:

Emissions Factor Units:

Factor Controlled? (Y/N):

Emissions Factor Operating Rate:

Emissions Factor Operating Rate Units:

Emissions [tons/yr]: **2.09**

Supporting Emissions Calculation Data:

See "2003 FER calcs.xls". Emissions from the baghouse associated with this emission unit and F005 are reported with this unit.

SCC ID: **3-04-003-71** Pollutant ID: **PM =< 2.5 microns**

Emissions Method Description: **Other**

Auto-calculate Emissions? (Y/N): **No**

Primary Control Equipment Description: **Fabric Filter Low Temperature**

Year Installed (Primary): **1997**

Secondary Control Equipment Description: **No Control Method**

Year Installed (Secondary):

Control System Capture Efficiency:

Control Device Efficiency:

Overall Device Efficiency: **99.00**

Annual Adjustment Factor: **0.00**

Overall Efficiency Method: **Design**

Emissions Factor:

Emissions Factor Units:

Factor Controlled? (Y/N):

Emissions Factor Operating Rate:

Emissions Factor Operating Rate Units:

Emissions [tons/yr]: **2.09**

Supporting Emissions Calculation Data:

See "2003 FER calcs.xls". Emissions from the baghouse associated with this emission unit and F005 are reported with this unit.

6. Emissions information: (continued)

SCC ID: **3-04-003-71** Pollutant ID: **Particulate Matter**

Emissions Method Description: **Other**

Auto-calculate Emissions? (Y/N): **No**

Primary Control Equipment Description: **Fabric Filter Low Temperature**

Year Installed (Primary): **1997**

Secondary Control Equipment Description: **No Control Method**

Year Installed (Secondary):

Control System Capture Efficiency:

Control Device Efficiency:

Overall Device Efficiency: **99.00**

Annual Adjustment Factor: **0.00**

Overall Efficiency Method: **Design**

Emissions Factor:

Emissions Factor Units:

Factor Controlled? (Y/N):

Emissions Factor Operating Rate:

Emissions Factor Operating Rate Units:

Emissions [tons/yr]: **2.09**

Supporting Emissions Calculation Data:

See "2003 FER calcs.xls". Emissions from the baghouse associated with this emission unit and F005 are reported with this unit.

SCC ID: **3-04-003-71** Pollutant ID: **Volatile organic compounds**

Emissions Method Description: **Other**

Auto-calculate Emissions? (Y/N): **No**

Primary Control Equipment Description: **No Control Method**

Year Installed (Primary):

Secondary Control Equipment Description: **No Control Method**

Year Installed (Secondary):

Control System Capture Efficiency:

Control Device Efficiency:

Overall Device Efficiency: **0.00**

Annual Adjustment Factor: **0.00**

Overall Efficiency Method: **Not applicable**

Emissions Factor:

Emissions Factor Units:

Factor Controlled? (Y/N):

Emissions Factor Operating Rate:

Emissions Factor Operating Rate Units:

Emissions [tons/yr]: **0.45**

Supporting Emissions Calculation Data:

See "2003 FER calcs.xls".

7. Summary for all SCC IDs:

SCC ID	PART	SO2	NOx	CO	OC	VOC	Hg	Pb	As	Bz
3-04-003-71	2.09	0	0	0	0.45	0.45	0	0	0	0
Totals:	2.09	0	0	0	0.45	0.45	0	0	0	0

Schedule

8. Boiler design capacity/heat input: **0.00** (MMBtu/hr)

9. Space heat: **0.00** (%)

10. Annual throughput:

December - February: **25.00** (%)
March - May: **25.00** (%)
June - August: **25.00** (%)
September - November: **25.00** (%)

11. Normal operating schedule

Hours/day: **8**
Days/week: **5**
Weeks/year: **50**

12. Peak ozone season daily emissions rate:

VOC: **2.450** (lbs/day)
NOx: **0.000** (lbs/day)
☒ **Autocalculated**

Inventory

13. Construction date: **9/97**

14. Modification date:

15. Shutdown date:

16. Emissions unit comments (optional):

17. Federally-enforceable operating restrictions:

Point Information

18. Emissions point centroid location:

○ UTM — Zone: **17** — Vertical: **4452.60** — Horizontal: **426.83**

● Lat/Long

	Degrees	Minutes	Seconds
Latitude:	**40**	**14**	**49**
Longitude:	**81**	**51**	**37**

19. Associated emissions egress point:

Emissions Egress Point ID: **39FAN .B8**

Emissions Egress Point Type: **Vertical**
Geographical Preference: **Lat/Long**
UTM Zone: **17**
UTM Vertical: **4,452.60**
UTM Horizontal: **426.83**
Longitude: **81**
Longitude: **51**
Longitude: **37**
Latitude: **40**
Latitude: **14**
Latitude: **49**
Continuous Emissions Recorder? (Y/N):
GEP Building Height [ft]:
GEP Building Length [ft]:
GEP Building Width [ft]:

Shape: **Round**
Emissions Egress Point Cross Sectional Area [sq ft]: **27**
Emissions Egress Point Height [ft]: **40.80**
Emissions Egress Point Diameter [ft]: **5.92**
Exit Gas Temperature at Maximum Operation [° F]: **70**
Exit Gas Temperature at Average Operation [° F]: **70**
Exit Gas Flow at Maximum Operation [acfm]: **54,000**
Exit Gas Flow at Average Operation [acfm]: **54,000**
Emission Egress Point Base Elevation [ft]: **765**
Release Height [ft]:
Plume Temperature [° F]:
Area of Emissions [sq ft]:

19. Associated emissions egress point: (continued)

Emissions Egress Point ID: 40FAN .B8

Emissions Egress Point Type: **Vertical**
Geographical Preference: **Lat/Long**
UTM Zone: **17**
UTM Vertical: **4,452.60**
UTM Horizontal: **426.83**
Longitude: **81**
Longitude: **51**
Longitude: **37**
Latitude: **40**
Latitude: **14**
Latitude: **49**
Continuous Emissions Recorder? (Y/N):
GEP Building Height [ft]:
GEP Building Length [ft]:
GEP Building Width [ft]:

Shape: **Round**
Emissions Egress Point Cross Sectional Area [sq ft]: **27**
Emissions Egress Point Height [ft]: **31.27**
Emissions Egress Point Diameter [ft]: **5.92**
Exit Gas Temperature at Maximum Operation [° F]: **70**
Exit Gas Temperature at Average Operation [° F]: **70**
Exit Gas Flow at Maximum Operation [acfm]: **54,000**
Exit Gas Flow at Average Operation [acfm]: **54,000**
Emission Egress Point Base Elevation [ft]: **765**
Release Height [ft]:
Plume Temperature [° F]:
Area of Emissions [sq ft]:

Emissions Egress Point ID: 41F005.B8

Emissions Egress Point Type: **Vertical**
Geographical Preference: **Lat/Long**
UTM Zone: **17**
UTM Vertical: **4,452.60**
UTM Horizontal: **426.83**
Longitude: **81**
Longitude: **51**
Longitude: **37**
Latitude: **40**
Latitude: **14**
Latitude: **49**
Continuous Emissions Recorder? (Y/N): **No**
GEP Building Height [ft]: **42.00**
GEP Building Length [ft]: **630.00**
GEP Building Width [ft]: **350.00**

Shape: **Round**
Emissions Egress Point Cross Sectional Area [sq ft]: **0**
Emissions Egress Point Height [ft]: **15.00**
Emissions Egress Point Diameter [ft]: **0.67**
Exit Gas Temperature at Maximum Operation [° F]: **70**
Exit Gas Temperature at Average Operation [° F]: **70**
Exit Gas Flow at Maximum Operation [acfm]: **1,800**
Exit Gas Flow at Average Operation [acfm]: **1,800**
Emission Egress Point Base Elevation [ft]: **765**
Release Height [ft]:
Plume Temperature [° F]:
Area of Emissions [sq ft]:

19. Associated emissions egress point: (continued)

Emissions Egress Point ID: **55F014.B8**

Emissions Egress Point Type: **Vertical**
Geographical Preference: **Lat/Long**
UTM Zone: **17**
UTM Vertical: **4,452.60**
UTM Horizontal: **426.83**
Longitude: **81**
Longitude: **51**
Longitude: **37**
Latitude: **40**
Latitude: **14**
Latitude: **49**
Continuous Emissions Recorder? (Y/N): **No**
GEP Building Height [ft]: **42.00**
GEP Building Length [ft]: **630.00**
GEP Building Width [ft]: **350.00**

Shape: **Rectangle**
Emissions Egress Point Cross Sectional Area [sq ft]: **5**
Emissions Egress Point Height [ft]: **31.27**
Emissions Egress Point Diameter [ft]: **2.59**
Exit Gas Temperature at Maximum Operation [° F]: **70**
Exit Gas Temperature at Average Operation [° F]: **70**
Exit Gas Flow at Maximum Operation [acfm]: **10,088**
Exit Gas Flow at Average Operation [acfm]: **10,088**
Emission Egress Point Base Elevation [ft]: **764**
Release Height [ft]:
Plume Temperature [° F]:
Area of Emissions [sq ft]:

Confidential Claims

20. Complete the table below:

Confidential item:

Basis for confidentiality claim:

State of Ohio Environmental Protection Agency

Facility Name: **Clow Water Systems Company**
Facility ID: **06-16-01-0006**
Title: **2003-F015**

Emissions Reporting Form: Emissions Unit Information

General Information

1. Emissions form(s): ☒ **Emissions fee report** ☐ Emissions statement ☒ **Emissions inventory**

2. Reporting period: **2003**

3. OEPA ID(s): **FOUNDRY SHOT BLAST (F015)**

4. Annual operating hours: **2,023**

SCC Information

5. Select an SCC ID and complete the table below:

SCC ID: **3-04-003-41**

User Description for SCC (optional):

SCC operating rate units: **Tons Castings Cleaned**

SCC Annual Operating Rate [SCC Units]: **5,959.00000**

Ash [%]:

Maximum Hourly Operating Rate [SCC Units]: **20.000**

Sulfur [%]:

SCC Comments:

6. Emissions information:

SCC ID: **3-04-003-41** Pollutant ID: **PM =< 10 microns**

Emissions Method Description: **Other**

Overall Efficiency Method: **Design**

Auto-calculate Emissions? (Y/N): **No**

Emissions Factor:

Primary Control Equipment Description: **Fabric Filter Low Temperature**

Emissions Factor Units:

Year Installed (Primary): **1972**

Factor Controlled? (Y/N):

Secondary Control Equipment Description: **No Control Method**

Emissions Factor Operating Rate:

Year Installed (Secondary):

Emissions Factor Operating Rate Units:

Control System Capture Efficiency:

Control Device Efficiency:

Overall Device Efficiency: **99.90**

Annual Adjustment Factor: **0.00**

Emissions [tons/yr]: **8.03**

Supporting Emissions Calculation Data:

See "2003 FER calcs.xls". Emissions from the baghouse associated with this emission unit are included with this unit.

6. Emissions information: (continued)

SCC ID: **3-04-003-41** Pollutant ID: **PM =< 2.5 microns**

Emissions Method Description: **Other**

Auto-calculate Emissions? (Y/N): **No**

Primary Control Equipment Description: **Fabric Filter Low Temperature**

Year Installed (Primary): **1972**

Secondary Control Equipment Description: **No Control Method**

Year Installed (Secondary):

Control System Capture Efficiency:

Control Device Efficiency:

Overall Device Efficiency: **99.90**

Annual Adjustment Factor: **0.00**

Overall Efficiency Method: **Design**

Emissions Factor:

Emissions Factor Units:

Factor Controlled? (Y/N):

Emissions Factor Operating Rate:

Emissions Factor Operating Rate Units:

Emissions [tons/yr]: **8.03**

Supporting Emissions Calculation Data:

See "2003 FER calcs.xls". Emissions from the baghouse associated with this emission unit are included with this unit.

SCC ID: **3-04-003-41** Pollutant ID: **Particulate Matter**

Emissions Method Description: **Other**

Auto-calculate Emissions? (Y/N): **No**

Primary Control Equipment Description: **Fabric Filter Low Temperature**

Year Installed (Primary): **1972**

Secondary Control Equipment Description: **No Control Method**

Year Installed (Secondary):

Control System Capture Efficiency:

Control Device Efficiency:

Overall Device Efficiency: **99.90**

Annual Adjustment Factor: **0.00**

Overall Efficiency Method: **Design**

Emissions Factor:

Emissions Factor Units:

Factor Controlled? (Y/N):

Emissions Factor Operating Rate:

Emissions Factor Operating Rate Units:

Emissions [tons/yr]: **8.05**

Supporting Emissions Calculation Data:

See "2003 FER calcs.xls". Emissions from the baghouse associated with this emission unit are included with this unit.

7. Summary for all SCC IDs:

SCC ID	PART	SO2	NOx	CO	OC	VOC	Hg	Pb	As	Bz
3-04-003-41	8.05	0	0	0	0	0	0	0	0	0
Totals:	8.05	0	0	0	0	0	0	0	0	0

Schedule

8. Boiler design capacity/heat input: **0.00** (MMBtu/hr)

9. Space heat: **0.00** (%)

10. Annual throughput:

December - February: **25.00** (%)
March - May: **25.00** (%)
June - August: **25.00** (%)
September - November: **25.00** (%)

11. Normal operating schedule

Hours/day: **8**
Days/week: **5**
Weeks/year: **50**

12. Peak ozone season daily emissions rate:

VOC: **0.000** (lbs/day)
NOx: **0.000** (lbs/day)

☒ **Autocalculated**

Inventory

13. Construction date: **6/72**

14. Modification date:

15. Shutdown date:

16. Emissions unit comments (optional):

17. Federally-enforceable operating restrictions:

Point Information

18. Emissions point centroid location:

○ UTM	Zone	Vertical	Horizontal	● Lat/Long		Degrees	Minutes	Seconds
	17	**4452.54**	**426.85**		Latitude:	**40**	**14**	**47**
					Longitude:	**81**	**51**	**36**

19. Associated emissions egress point:

Emissions Egress Point ID: **46F015.C0**

Emissions Egress Point Type: **Horizontal**
Geographical Preference: **Lat/Long**
UTM Zone: **17**
UTM Vertical: **4,452.54**
UTM Horizontal: **426.85**
Longitude: **81**
Longitude: **51**
Longitude: **36**
Latitude: **40**
Latitude: **14**
Latitude: **47**
Continuous Emissions Recorder? (Y/N): **No**
GEP Building Height [ft]: **42.00**
GEP Building Length [ft]: **630.00**
GEP Building Width [ft]: **350.00**

Shape: **Rectangle**
Emissions Egress Point Cross Sectional Area [sq ft]: **3**
Emissions Egress Point Height [ft]: **19.00**
Emissions Egress Point Diameter [ft]: **2.09**
Exit Gas Temperature at Maximum Operation [° F]: **70**
Exit Gas Temperature at Average Operation [° F]: **70**
Exit Gas Flow at Maximum Operation [acfm]: **10,700**
Exit Gas Flow at Average Operation [acfm]: **10,700**
Emission Egress Point Base Elevation [ft]: **765**
Release Height [ft]:
Plume Temperature [° F]:
Area of Emissions [sq ft]:

19. Associated emissions egress point: (continued)

Emissions Egress Point ID: **M-F011.C0**

Emissions Egress Point Type:	**Fugitive**	Shape:	
Geographical Preference:	**Lat/Long**	Emissions Egress Point Cross Sectional Area [sq ft]:	
UTM Zone:	**17**	Emissions Egress Point Height [ft]:	
UTM Vertical:	**4,452.54**	Emissions Egress Point Diameter [ft]:	
UTM Horizontal:	**426.85**	Exit Gas Temperature at Maximum Operation [° F]:	
Longitude:	**81**	Exit Gas Temperature at Average Operation [° F]:	
Longitude:	**51**	Exit Gas Flow at Maximum Operation [acfm]:	
Longitude:	**36**	Exit Gas Flow at Average Operation [acfm]:	
Latitude:	**40**	Emission Egress Point Base Elevation [ft]:	
Latitude:	**14**	Release Height [ft]:	**6.00**
Latitude:	**47**	Plume Temperature [° F]:	**100**
Continuous Emissions Recorder? (Y/N):		Area of Emissions [sq ft]:	**5,000.00**
GEP Building Height [ft]:			
GEP Building Length [ft]:			
GEP Building Width [ft]:			

Confidential Claims

20. Complete the table below:

Confidential item:

Basis for confidentiality claim:

State of Ohio Environmental Protection Agency

Facility Name: **Clow Water Systems Company**
Facility ID: **06-16-01-0006**
Title: **2003-F016**

Emissions Reporting Form: Emissions Unit Information

General Information

1. Emissions form(s): ☒ **Emissions fee report** ☐ Emissions statement ☒ **Emissions inventory**

2. Reporting period: **2003**

3. OEPA ID(s): **BMM SHAKEOUT (F016)**

4. Annual operating hours: **2,023**

SCC Information

5. Select an SCC ID and complete the table below:

SCC ID: **3-04-003-31**

User Description for SCC (optional):

SCC operating rate units: **Tons of Metal Charged**

SCC Annual Operating Rate [SCC Units]: **3,910.00000**

Ash [%]: **0.00**

Maximum Hourly Operating Rate [SCC Units]: **25.000**

Sulfur [%]: **0.00**

SCC Comments:

6. Emissions information:

SCC ID: **3-04-003-31** Pollutant ID: **Carbon monoxide**

Emissions Method Description: **Other**

Overall Efficiency Method: **Not applicable**

Auto-calculate Emissions? (Y/N): **No**

Emissions Factor:

Emissions Factor Units:

Primary Control Equipment Description: **No Control Method**

Year Installed (Primary):

Factor Controlled? (Y/N):

Secondary Control Equipment Description: **No Control Method**

Emissions Factor Operating Rate:

Year Installed (Secondary):

Emissions Factor Operating Rate Units:

Control System Capture Efficiency:

Control Device Efficiency:

Overall Device Efficiency: **0.00**

Annual Adjustment Factor: **0.00**

Emissions [tons/yr]: **1.96**

Supporting Emissions Calculation Data:

6. Emissions information: (continued)

SCC ID: **3-04-003-31** Pollutant ID: **Organic compounds**

Emissions Method Description: **Other**

Auto-calculate Emissions? (Y/N): **No**

Primary Control Equipment Description: **No Control Method**

Year Installed (Primary):

Secondary Control Equipment Description: **No Control Method**

Year Installed (Secondary):

Control System Capture Efficiency:

Control Device Efficiency:

Overall Device Efficiency: **0.00**

Annual Adjustment Factor: **0.00**

Overall Efficiency Method: **Not applicable**

Emissions Factor:

Emissions Factor Units:

Factor Controlled? (Y/N):

Emissions Factor Operating Rate:

Emissions Factor Operating Rate Units:

Emissions [tons/yr]: **2.35**

Supporting Emissions Calculation Data:

See "FER 2003 calcs.xls".

SCC ID: **3-04-003-31** Pollutant ID: **PM =< 10 microns**

Emissions Method Description: **Other**

Auto-calculate Emissions? (Y/N): **No**

Primary Control Equipment Description: **Fabric Filter Low Temperature**

Year Installed (Primary): **2000**

Secondary Control Equipment Description: **No Control Method**

Year Installed (Secondary):

Control System Capture Efficiency:

Control Device Efficiency:

Overall Device Efficiency: **99.99**

Annual Adjustment Factor: **0.00**

Overall Efficiency Method: **Design**

Emissions Factor:

Emissions Factor Units:

Factor Controlled? (Y/N):

Emissions Factor Operating Rate:

Emissions Factor Operating Rate Units:

Emissions [tons/yr]: **25.35**

Supporting Emissions Calculation Data:

See "FER 2003 calcs.xls". Stack emissions from the baghouse associated with this emission unit and F006, F002 & F010 are included with this unit.

6. Emissions information: (continued)

SCC ID: **3-04-003-31** Pollutant ID: **PM =< 2.5 microns**

Emissions Method Description: **Other**

Auto-calculate Emissions? (Y/N): **No**

Primary Control Equipment Description: **Fabric Filter Low Temperature**

Year Installed (Primary): **2000**

Secondary Control Equipment Description: **No Control Method**

Year Installed (Secondary):

Control System Capture Efficiency:

Control Device Efficiency:

Overall Device Efficiency: **99.99**

Annual Adjustment Factor: **0.00**

Overall Efficiency Method: **Design**

Emissions Factor:

Emissions Factor Units:

Factor Controlled? (Y/N):

Emissions Factor Operating Rate:

Emissions Factor Operating Rate Units:

Emissions [tons/yr]: **25.35**

Supporting Emissions Calculation Data:

See "FER 2003 calcs.xls". Stack emissions from the baghouse associated with this emission unit and F006, F002 & F010 are included with this unit.

SCC ID: **3-04-003-31** Pollutant ID: **Lead**

Emissions Method Description: **Other**

Auto-calculate Emissions? (Y/N): **No**

Primary Control Equipment Description: **Fabric Filter Low Temperature**

Year Installed (Primary): **2000**

Secondary Control Equipment Description: **No Control Method**

Year Installed (Secondary):

Control System Capture Efficiency:

Control Device Efficiency:

Overall Device Efficiency: **99.99**

Annual Adjustment Factor: **0.00**

Overall Efficiency Method: **Design**

Emissions Factor:

Emissions Factor Units:

Factor Controlled? (Y/N):

Emissions Factor Operating Rate:

Emissions Factor Operating Rate Units:

Emissions [tons/yr]: **0.00**

Supporting Emissions Calculation Data:

See "FER 2003 calcs.xls".

6. Emissions information: (continued)

SCC ID: **3-04-003-31** Pollutant ID: **Particulate Matter**

Emissions Method Description: **Other**

Auto-calculate Emissions? (Y/N): **No**

Primary Control Equipment Description: **Fabric Filter Low Temperature**

Year Installed (Primary): **2000**

Secondary Control Equipment Description: **No Control Method**

Year Installed (Secondary):

Control System Capture Efficiency:

Control Device Efficiency:

Overall Device Efficiency: **99.99**

Annual Adjustment Factor: **0.00**

Overall Efficiency Method: **Design**

Emissions Factor:

Emissions Factor Units:

Factor Controlled? (Y/N):

Emissions Factor Operating Rate:

Emissions Factor Operating Rate Units:

Emissions [tons/yr]: **25.36**

Supporting Emissions Calculation Data:

See "FER 2003 calcs.xls". Stack emissions from the baghouse associated with this emission unit and F006, F002 & F010 are included with this unit.

SCC ID: **3-04-003-31** Pollutant ID: **Volatile organic compounds**

Emissions Method Description: **Other**

Auto-calculate Emissions? (Y/N): **No**

Primary Control Equipment Description: **No Control Method**

Year Installed (Primary):

Secondary Control Equipment Description: **No Control Method**

Year Installed (Secondary):

Control System Capture Efficiency:

Control Device Efficiency:

Overall Device Efficiency: **0.00**

Annual Adjustment Factor: **0.00**

Overall Efficiency Method: **Not applicable**

Emissions Factor:

Emissions Factor Units:

Factor Controlled? (Y/N):

Emissions Factor Operating Rate:

Emissions Factor Operating Rate Units:

Emissions [tons/yr]: **2.35**

Supporting Emissions Calculation Data:

See "FER 2003 calcs.xls".

7. Summary for all SCC IDs:

SCC ID	PART	SO2	NOx	CO	OC	VOC	Hg	Pb	As	Bz
3-04-003-31	25.36	0	0	1.96	2.35	2.35	0	0	0	0
Totals:	25.36	0	0	1.96	2.35	2.35	0	0	0	0

Schedule

8. Boiler design capacity/heat input: **0.00** (MMBtu/hr)

9. Space heat: **0.00** (%)

10. Annual throughput:

December - February: **25.00** (%)
March - May: **25.00** (%)
June - August: **25.00** (%)
September - November: **25.00** (%)

11. Normal operating schedule

Hours/day: **8**
Days/week: **5**
Weeks/year: **50**

12. Peak ozone season daily emissions rate:

VOC: **12.770** (lbs/day)
NOx: **0.000** (lbs/day)

☒ **Autocalculated**

Inventory

13. Construction date: **1/73**

14. Modification date: **6/74**

15. Shutdown date:

16. Emissions unit comments (optional):

17. Federally-enforceable operating restrictions:

Point Information

18. Emissions point centroid location:

○ UTM	Zone	Vertical	Horizontal	● Lat/Long		Degrees	Minutes	Seconds
	17	**4452.54**	**426.80**		Latitude:	**40**	**14**	**47**
					Longitude:	**81**	**51**	**38**

19. Associated emissions egress point:

Emissions Egress Point ID: **37FAN .B8**

Emissions Egress Point Type: **Vertical**
Geographical Preference: **Lat/Long**
UTM Zone: **17**
UTM Vertical: **4,452.54**
UTM Horizontal: **426.80**
Longitude: **81**
Longitude: **51**
Longitude: **38**
Latitude: **40**
Latitude: **14**
Latitude: **47**
Continuous Emissions Recorder? (Y/N):
GEP Building Height [ft]:
GEP Building Length [ft]:
GEP Building Width [ft]:

Shape: **Round**
Emissions Egress Point Cross Sectional Area [sq ft]: **27**
Emissions Egress Point Height [ft]: **50.54**
Emissions Egress Point Diameter [ft]: **5.92**
Exit Gas Temperature at Maximum Operation [° F]: **70**
Exit Gas Temperature at Average Operation [° F]: **70**
Exit Gas Flow at Maximum Operation [acfm]: **54,000**
Exit Gas Flow at Average Operation [acfm]: **54,000**
Emission Egress Point Base Elevation [ft]: **765**
Release Height [ft]:
Plume Temperature [° F]:
Area of Emissions [sq ft]:

19. Associated emissions egress point: (continued)

Emissions Egress Point ID: 38FAN .B8

Emissions Egress Point Type: **Vertical**
Geographical Preference: **Lat/Long**
UTM Zone: **17**
UTM Vertical: **4,452.54**
UTM Horizontal: **426.80**
Longitude: **81**
Longitude: **51**
Longitude: **38**
Latitude: **40**
Latitude: **14**
Latitude: **47**
Continuous Emissions Recorder? (Y/N):
GEP Building Height [ft]:
GEP Building Length [ft]:
GEP Building Width [ft]:

Shape: **Round**
Emissions Egress Point Cross Sectional Area [sq ft]: **27**
Emissions Egress Point Height [ft]: **62.36**
Emissions Egress Point Diameter [ft]: **5.92**
Exit Gas Temperature at Maximum Operation [° F]: **70**
Exit Gas Temperature at Average Operation [° F]: **70**
Exit Gas Flow at Maximum Operation [acfm]: **54,000**
Exit Gas Flow at Average Operation [acfm]: **54,000**
Emission Egress Point Base Elevation [ft]: **765**
Release Height [ft]:
Plume Temperature [° F]:
Area of Emissions [sq ft]:

Emissions Egress Point ID: 42FAN .B9

Emissions Egress Point Type: **Vertical**
Geographical Preference: **Lat/Long**
UTM Zone: **17**
UTM Vertical: **4,452.54**
UTM Horizontal: **426.80**
Longitude: **81**
Longitude: **51**
Longitude: **38**
Latitude: **40**
Latitude: **14**
Latitude: **47**
Continuous Emissions Recorder? (Y/N):
GEP Building Height [ft]:
GEP Building Length [ft]:
GEP Building Width [ft]:

Shape: **Round**
Emissions Egress Point Cross Sectional Area [sq ft]: **27**
Emissions Egress Point Height [ft]: **31.27**
Emissions Egress Point Diameter [ft]: **5.92**
Exit Gas Temperature at Maximum Operation [° F]: **70**
Exit Gas Temperature at Average Operation [° F]: **70**
Exit Gas Flow at Maximum Operation [acfm]: **54,000**
Exit Gas Flow at Average Operation [acfm]: **54,000**
Emission Egress Point Base Elevation [ft]: **765**
Release Height [ft]:
Plume Temperature [° F]:
Area of Emissions [sq ft]:

19. Associated emissions egress point: (continued)

Emissions Egress Point ID: **63FAN.B9**

Emissions Egress Point Type:	**Vertical**	Shape:	**Round**
Geographical Preference:	**Lat/Long**	Emissions Egress Point Cross Sectional Area [sq ft]:	**24**
UTM Zone:	**17**	Emissions Egress Point Height [ft]:	**28.30**
UTM Vertical:	**4,452.54**	Emissions Egress Point Diameter [ft]:	**5.58**
UTM Horizontal:	**426.80**	Exit Gas Temperature at Maximum Operation [° F]:	**120**
Longitude:	**81**	Exit Gas Temperature at Average Operation [° F]:	**90**
Longitude:	**51**	Exit Gas Flow at Maximum Operation [acfm]:	**96,000**
Longitude:	**38**	Exit Gas Flow at Average Operation [acfm]:	**96,000**
Latitude:	**40**	Emission Egress Point Base Elevation [ft]:	**762**
Latitude:	**14**	Release Height [ft]:	
Latitude:	**47**	Plume Temperature [° F]:	
Continuous Emissions Recorder? (Y/N):	**No**	Area of Emissions [sq ft]:	
GEP Building Height [ft]:	**42.00**		
GEP Building Length [ft]:	**630.00**		
GEP Building Width [ft]:	**350.00**		

Confidential Claims

20. Complete the table below:

Confidential item:

Basis for confidentiality claim:

State of Ohio Environmental Protection Agency

Facility Name: **Clow Water Systems Company**
Facility ID: **06-16-01-0006**
Title: **2003-F017**

Emissions Reporting Form: Emissions Unit Information

General Information

1. Emissions form(s): ☒ **Emissions fee report** ☐ Emissions statement ☒ **Emissions inventory**

2. Reporting period: **2003**

3. OEPA ID(s): **SCRAP YARDS & METAL CHARGE HOPPER (F017)**

4. Annual operating hours: **2,300**

SCC Information

5. Select an SCC ID and complete the table below:

SCC ID: **3-04-003-15**

User Description for SCC (optional):

SCC operating rate units: **Tons of Metal Charged**

SCC Annual Operating Rate [SCC Units]: **158,643.00000**

Ash [%]:

Maximum Hourly Operating Rate [SCC Units]: **85.000**

Sulfur [%]:

SCC Comments:

6. Emissions information:

SCC ID: **3-04-003-15** Pollutant ID: **PM =< 10 microns**

Emissions Method Description: **Other**

Overall Efficiency Method: **Not applicable**

Auto-calculate Emissions? (Y/N): **No**

Emissions Factor:

Primary Control Equipment Description: **No Control Method**

Emissions Factor Units:

Year Installed (Primary):

Factor Controlled? (Y/N):

Secondary Control Equipment Description: **No Control Method**

Emissions Factor Operating Rate:

Year Installed (Secondary):

Control System Capture Efficiency:

Emissions Factor Operating Rate Units:

Control Device Efficiency:

Overall Device Efficiency: **0.00**

Annual Adjustment Factor: **0.00**

Emissions [tons/yr]: **3.33**

Supporting Emissions Calculation Data:

See "2003 FER calcs.xls".

6. Emissions information: (continued)

SCC ID: **3-04-003-15** Pollutant ID: **PM =< 2.5 microns**

Emissions Method Description: **Other**

Auto-calculate Emissions? (Y/N): **No**

Primary Control Equipment Description: **No Control Method**

Year Installed (Primary):

Secondary Control Equipment Description: **No Control Method**

Year Installed (Secondary):

Control System Capture Efficiency:

Control Device Efficiency:

Overall Device Efficiency: **0.00**

Annual Adjustment Factor: **0.00**

Supporting Emissions Calculation Data:

See "2003 FER calcs.xls".

Overall Efficiency Method: **Not applicable**

Emissions Factor:

Emissions Factor Units:

Factor Controlled? (Y/N):

Emissions Factor Operating Rate:

Emissions Factor Operating Rate Units:

Emissions [tons/yr]: **2.78**

SCC ID: **3-04-003-15** Pollutant ID: **Particulate Matter**

Emissions Method Description: **Other**

Auto-calculate Emissions? (Y/N): **No**

Primary Control Equipment Description: **No Control Method**

Year Installed (Primary):

Secondary Control Equipment Description: **No Control Method**

Year Installed (Secondary):

Control System Capture Efficiency:

Control Device Efficiency:

Overall Device Efficiency: **0.00**

Annual Adjustment Factor: **0.00**

Supporting Emissions Calculation Data:

See "2003 FER calcs.xls".

Overall Efficiency Method: **Not applicable**

Emissions Factor:

Emissions Factor Units:

Factor Controlled? (Y/N):

Emissions Factor Operating Rate:

Emissions Factor Operating Rate Units:

Emissions [tons/yr]: **5.55**

7. Summary for all SCC IDs:

SCC ID	PART	SO2	NOx	CO	OC	VOC	Hg	Pb	As	Bz
3-04-003-15	5.55	0	0	0	0	0	0	0	0	0
Totals:	5.55	0	0	0	0	0	0	0	0	0

Schedule

8. Boiler design capacity/heat input: **0.00** (MMBtu/hr)

9. Space heat: **0.00** (%)

10. Annual throughput:

December - February: **25.00** (%)
March - May: **25.00** (%)
June - August: **25.00** (%)
September - November: **25.00** (%)

11. Normal operating schedule

Hours/day: **8**
Days/week: **5**
Weeks/year: **50**

12. Peak ozone season daily emissions rate:

VOC: **0.000** (lbs/day)
NOx: **0.000** (lbs/day)

☒ **Autocalculated**

Inventory

13. Construction date: **6/72**

14. Modification date: **6/88**

15. Shutdown date:

16. Emissions unit comments (optional):

17. Federally-enforceable operating restrictions:

Point Information

18. Emissions point centroid location:

○ UTM	Zone	Vertical	Horizontal	● Lat/Long		Degrees	Minutes	Seconds
	17	**4452.67**	**426.80**		Latitude:	**40**	**14**	**51**
					Longitude:	**81**	**51**	**38**

19. Associated emissions egress point:

Emissions Egress Point ID: **A-YARD1**

Emissions Egress Point Type: **Fugitive**
Geographical Preference: **Lat/Long**
UTM Zone: **17**
UTM Vertical: **4,452.67**
UTM Horizontal: **426.80**
Longitude: **81**
Longitude: **51**
Longitude: **38**
Latitude: **40**
Latitude: **14**
Latitude: **51**
Continuous Emissions Recorder? (Y/N): **No**
GEP Building Height [ft]: **42.00**
GEP Building Length [ft]: **630.00**
GEP Building Width [ft]: **350.00**

Shape:
Emissions Egress Point Cross Sectional Area [sq ft]:
Emissions Egress Point Height [ft]:
Emissions Egress Point Diameter [ft]:
Exit Gas Temperature at Maximum Operation [° F]:
Exit Gas Temperature at Average Operation [° F]:
Exit Gas Flow at Maximum Operation [acfm]:
Exit Gas Flow at Average Operation [acfm]:
Emission Egress Point Base Elevation [ft]:
Release Height [ft]: **10.00**
Plume Temperature [° F]: **70**
Area of Emissions [sq ft]: **8,228.25**

19. Associated emissions egress point: (continued)

Emissions Egress Point ID: **B-YARD2**

Emissions Egress Point Type:	**Fugitive**	Shape:	
Geographical Preference:	**Lat/Long**	Emissions Egress Point Cross Sectional Area [sq ft]:	
UTM Zone:	**17**	Emissions Egress Point Height [ft]:	
UTM Vertical:	**4,452.48**	Emissions Egress Point Diameter [ft]:	
UTM Horizontal:	**426.87**	Exit Gas Temperature at Maximum Operation [° F]:	
Longitude:	**81**	Exit Gas Temperature at Average Operation [° F]:	
Longitude:	**51**	Exit Gas Flow at Maximum Operation [acfm]:	
Longitude:	**35**	Exit Gas Flow at Average Operation [acfm]:	
Latitude:	**40**	Emission Egress Point Base Elevation [ft]:	
Latitude:	**14**	Release Height [ft]:	**10.00**
Latitude:	**45**	Plume Temperature [° F]:	**70**
Continuous Emissions Recorder? (Y/N):	**No**	Area of Emissions [sq ft]:	**9,999.99**
GEP Building Height [ft]:	**0.00**		
GEP Building Length [ft]:	**0.00**		
GEP Building Width [ft]:	**0.00**		

Confidential Claims

20. Complete the table below:

Confidential item:

Basis for confidentiality claim:

State of Ohio Environmental Protection Agency

Facility Name: **Clow Water Systems Company**
Facility ID: **06-16-01-0006**
Title: **2003-F018**

Emissions Reporting Form: Emissions Unit Information

General Information

1. Emissions form(s): ☒ **Emissions fee report** ☐ Emissions statement ☒ **Emissions inventory**

2. Reporting period: **2003**

3. OEPA ID(s): **PIPE CASTING (F018)**

4. Annual operating hours: **2,300**

SCC Information

5. Select an SCC ID and complete the table below:

SCC ID: **3-04-003-20**

User Description for SCC (optional): **Perment molds**

SCC operating rate units: **Tons of Metal Charged**

SCC Annual Operating Rate [SCC Units]: **150,583.00000**

Ash [%]:

Maximum Hourly Operating Rate [SCC Units]: **75.000**

Sulfur [%]:

SCC Comments:

6. Emissions information:

SCC ID: **3-04-003-20** Pollutant ID: **Organic compounds**

Emissions Method Description: **Other**

Overall Efficiency Method: **Not applicable**

Auto-calculate Emissions? (Y/N): **No**

Emissions Factor:

Primary Control Equipment Description: **No Control Method**

Emissions Factor Units:

Year Installed (Primary):

Factor Controlled? (Y/N):

Secondary Control Equipment Description: **No Control Method**

Emissions Factor Operating Rate:

Year Installed (Secondary):

Emissions Factor Operating Rate Units:

Control System Capture Efficiency:

Control Device Efficiency:

Overall Device Efficiency: **0.00**

Annual Adjustment Factor: **0.00**

Emissions [tons/yr]: **10.54**

Supporting Emissions Calculation Data:

See "2003 FER calcs.xls".

6. Emissions information: (continued)

SCC ID: **3-04-003-20** Pollutant ID: **PM =< 10 microns**

Emissions Method Description: **Other**

Auto-calculate Emissions? (Y/N): **No**

Primary Control Equipment Description: **No Control Method**

Year Installed (Primary):

Secondary Control Equipment Description: **No Control Method**

Year Installed (Secondary):

Control System Capture Efficiency:

Control Device Efficiency:

Overall Device Efficiency: **0.00**

Annual Adjustment Factor: **0.00**

Overall Efficiency Method: **Not applicable**

Emissions Factor:

Emissions Factor Units:

Factor Controlled? (Y/N):

Emissions Factor Operating Rate:

Emissions Factor Operating Rate Units:

Emissions [tons/yr]: **8.31**

Supporting Emissions Calculation Data:

See "2003 FER calcs.xls".

SCC ID: **3-04-003-20** Pollutant ID: **PM =< 2.5 microns**

Emissions Method Description: **Other**

Auto-calculate Emissions? (Y/N): **No**

Primary Control Equipment Description: **No Control Method**

Year Installed (Primary):

Secondary Control Equipment Description: **No Control Method**

Year Installed (Secondary):

Control System Capture Efficiency:

Control Device Efficiency:

Overall Device Efficiency: **0.00**

Annual Adjustment Factor: **0.00**

Overall Efficiency Method: **Not applicable**

Emissions Factor:

Emissions Factor Units:

Factor Controlled? (Y/N):

Emissions Factor Operating Rate:

Emissions Factor Operating Rate Units:

Emissions [tons/yr]: **7.41**

Supporting Emissions Calculation Data:

See "2003 FER calcs.xls".

6. Emissions information: (continued)

SCC ID: **3-04-003-20** Pollutant ID: **Particulate Matter**

Emissions Method Description: **Other**

Auto-calculate Emissions? (Y/N): **No**

Primary Control Equipment Description: **No Control Method**

Year Installed (Primary):

Secondary Control Equipment Description: **No Control Method**

Year Installed (Secondary):

Control System Capture Efficiency:

Control Device Efficiency:

Overall Device Efficiency: **0.00**

Annual Adjustment Factor: **0.00**

Supporting Emissions Calculation Data:

See "2003 FER calcs.xls".

Overall Efficiency Method: **Not applicable**

Emissions Factor:

Emissions Factor Units:

Factor Controlled? (Y/N):

Emissions Factor Operating Rate:

Emissions Factor Operating Rate Units:

Emissions [tons/yr]: **9.03**

SCC ID: **3-04-003-20** Pollutant ID: **Volatile organic compounds**

Emissions Method Description: **Other**

Auto-calculate Emissions? (Y/N): **No**

Primary Control Equipment Description: **No Control Method**

Year Installed (Primary):

Secondary Control Equipment Description: **No Control Method**

Year Installed (Secondary):

Control System Capture Efficiency:

Control Device Efficiency:

Overall Device Efficiency: **0.00**

Annual Adjustment Factor: **0.00**

Supporting Emissions Calculation Data:

See "2003 FER calcs.xls".

Overall Efficiency Method: **Not applicable**

Emissions Factor:

Emissions Factor Units:

Factor Controlled? (Y/N):

Emissions Factor Operating Rate:

Emissions Factor Operating Rate Units:

Emissions [tons/yr]: **10.54**

7. Summary for all SCC IDs:

SCC ID	PART	SO2	NOx	CO	OC	VOC	Hg	Pb	As	Bz
3-04-003-20	9.03	0	0	0	10.54	10.54	0	0	0	0
Totals:	9.03	0	0	0	10.54	10.54	0	0	0	0

Schedule

8. Boiler design capacity/heat input: **0.00** (MMBtu/hr)

9. Space heat: **0.00** (%)

10. Annual throughput:

December - February: **25.00** (%)
March - May: **25.00** (%)
June - August: **25.00** (%)
September - November: **25.00** (%)

11. Normal operating schedule

Hours/day: **9**
Days/week: **5**
Weeks/year: **50**

12. Peak ozone season daily emissions rate:

VOC: **57.280** (lbs/day)
NOx: **0.000** (lbs/day)
☒ **Autocalculated**

Inventory

13. Construction date: **6/49**

14. Modification date: **6/95**

15. Shutdown date:

16. Emissions unit comments (optional):

17. Federally-enforceable operating restrictions:

Point Information

18. Emissions point centroid location:

○ UTM	Zone	Vertical	Horizontal	● Lat/Long		Degrees	Minutes	Seconds
	17	4452.70	426.73		Latitude:	40	14	52
					Longitude:	81	51	41

19. Associated emissions egress point:

Emissions Egress Point ID: **06FAN .B6**

Emissions Egress Point Type: **Vertical**
Geographical Preference: **Lat/Long**
UTM Zone: **17**
UTM Vertical: **4,452.67**
UTM Horizontal: **426.76**
Longitude: **81**
Longitude: **51**
Longitude: **40**
Latitude: **40**
Latitude: **14**
Latitude: **51**
Continuous Emissions Recorder? (Y/N): **No**
GEP Building Height [ft]: **42.00**
GEP Building Length [ft]: **630.00**
GEP Building Width [ft]: **350.00**

Shape: **Round**
Emissions Egress Point Cross Sectional Area [sq ft]: **27**
Emissions Egress Point Height [ft]: **43.17**
Emissions Egress Point Diameter [ft]: **5.92**
Exit Gas Temperature at Maximum Operation [° F]: **70**
Exit Gas Temperature at Average Operation [° F]: **70**
Exit Gas Flow at Maximum Operation [acfm]: **54,000**
Exit Gas Flow at Average Operation [acfm]: **54,000**
Emission Egress Point Base Elevation [ft]: **764**
Release Height [ft]:
Plume Temperature [° F]:
Area of Emissions [sq ft]:

19. Associated emissions egress point: (continued)

Emissions Egress Point ID: 07FAN .B6

Emissions Egress Point Type: **Vertical**
Geographical Preference: **Lat/Long**
UTM Zone: **17**
UTM Vertical: **4,452.70**
UTM Horizontal: **426.76**
Longitude: **81**
Longitude: **51**
Longitude: **40**
Latitude: **40**
Latitude: **14**
Latitude: **52**
Continuous Emissions Recorder? (Y/N): **No**
GEP Building Height [ft]: **42.00**
GEP Building Length [ft]: **630.00**
GEP Building Width [ft]: **350.00**

Shape: **Round**
Emissions Egress Point Cross Sectional Area [sq ft]: **27**
Emissions Egress Point Height [ft]: **41.20**
Emissions Egress Point Diameter [ft]: **5.92**
Exit Gas Temperature at Maximum Operation [° F]: **70**
Exit Gas Temperature at Average Operation [° F]: **70**
Exit Gas Flow at Maximum Operation [acfm]: **54,000**
Exit Gas Flow at Average Operation [acfm]: **54,000**
Emission Egress Point Base Elevation [ft]: **764**
Release Height [ft]:
Plume Temperature [° F]:
Area of Emissions [sq ft]:

Emissions Egress Point ID: 08FAN .B6

Emissions Egress Point Type: **Vertical**
Geographical Preference: **Lat/Long**
UTM Zone: **17**
UTM Vertical: **4,452.67**
UTM Horizontal: **426.76**
Longitude: **81**
Longitude: **51**
Longitude: **40**
Latitude: **40**
Latitude: **14**
Latitude: **51**
Continuous Emissions Recorder? (Y/N): **No**
GEP Building Height [ft]: **42.00**
GEP Building Length [ft]: **630.00**
GEP Building Width [ft]: **350.00**

Shape: **Round**
Emissions Egress Point Cross Sectional Area [sq ft]: **27**
Emissions Egress Point Height [ft]: **41.20**
Emissions Egress Point Diameter [ft]: **5.92**
Exit Gas Temperature at Maximum Operation [° F]: **70**
Exit Gas Temperature at Average Operation [° F]: **70**
Exit Gas Flow at Maximum Operation [acfm]: **54,000**
Exit Gas Flow at Average Operation [acfm]: **54,000**
Emission Egress Point Base Elevation [ft]: **764**
Release Height [ft]:
Plume Temperature [° F]:
Area of Emissions [sq ft]:

19. Associated emissions egress point: (continued)

Emissions Egress Point ID: 09FAN .B6

Emissions Egress Point Type: **Vertical**
Geographical Preference: **Lat/Long**
UTM Zone: **17**
UTM Vertical: **4,452.66**
UTM Horizontal: **427.70**
Longitude: **81**
Longitude: **51**
Longitude: **40**
Latitude: **40**
Latitude: **14**
Latitude: **51**
Continuous Emissions Recorder? (Y/N): **No**
GEP Building Height [ft]: **42.00**
GEP Building Length [ft]: **630.00**
GEP Building Width [ft]: **350.00**

Shape: **Round**
Emissions Egress Point Cross Sectional Area [sq ft]: **27**
Emissions Egress Point Height [ft]: **41.20**
Emissions Egress Point Diameter [ft]: **5.92**
Exit Gas Temperature at Maximum Operation [° F]: **70**
Exit Gas Temperature at Average Operation [° F]: **70**
Exit Gas Flow at Maximum Operation [acfm]: **54,000**
Exit Gas Flow at Average Operation [acfm]: **54,000**
Emission Egress Point Base Elevation [ft]: **764**
Release Height [ft]:
Plume Temperature [° F]:
Area of Emissions [sq ft]:

Emissions Egress Point ID: 10FAN .B6

Emissions Egress Point Type: **Vertical**
Geographical Preference: **Lat/Long**
UTM Zone: **17**
UTM Vertical: **4,452.70**
UTM Horizontal: **426.73**
Longitude: **81**
Longitude: **51**
Longitude: **41**
Latitude: **40**
Latitude: **14**
Latitude: **52**
Continuous Emissions Recorder? (Y/N): **No**
GEP Building Height [ft]: **42.00**
GEP Building Length [ft]: **630.00**
GEP Building Width [ft]: **350.00**

Shape: **Round**
Emissions Egress Point Cross Sectional Area [sq ft]: **27**
Emissions Egress Point Height [ft]: **41.20**
Emissions Egress Point Diameter [ft]: **5.92**
Exit Gas Temperature at Maximum Operation [° F]: **70**
Exit Gas Temperature at Average Operation [° F]: **70**
Exit Gas Flow at Maximum Operation [acfm]: **54,000**
Exit Gas Flow at Average Operation [acfm]: **54,000**
Emission Egress Point Base Elevation [ft]: **764**
Release Height [ft]:
Plume Temperature [° F]:
Area of Emissions [sq ft]:

19. Associated emissions egress point: (continued)

Emissions Egress Point ID: **11FAN .B6**

Emissions Egress Point Type: **Vertical**
Geographical Preference: **Lat/Long**
UTM Zone: **17**
UTM Vertical: **4,452.70**
UTM Horizontal: **426.73**
Longitude: **81**
Longitude: **51**
Longitude: **41**
Latitude: **40**
Latitude: **14**
Latitude: **52**
Continuous Emissions Recorder? (Y/N): **No**
GEP Building Height [ft]: **42.00**
GEP Building Length [ft]: **630.00**
GEP Building Width [ft]: **350.00**

Shape: **Round**
Emissions Egress Point Cross Sectional Area [sq ft]: **27**
Emissions Egress Point Height [ft]: **43.17**
Emissions Egress Point Diameter [ft]: **5.92**
Exit Gas Temperature at Maximum Operation [° F]: **70**
Exit Gas Temperature at Average Operation [° F]: **70**
Exit Gas Flow at Maximum Operation [acfm]: **54,000**
Exit Gas Flow at Average Operation [acfm]: **54,000**
Emission Egress Point Base Elevation [ft]: **764**
Release Height [ft]:
Plume Temperature [° F]:
Area of Emissions [sq ft]:

Emissions Egress Point ID: **54FAN .B6**

Emissions Egress Point Type: **Horizontal**
Geographical Preference: **Lat/Long**
UTM Zone: **17**
UTM Vertical: **4,452.70**
UTM Horizontal: **426.76**
Longitude: **81**
Longitude: **51**
Longitude: **40**
Latitude: **40**
Latitude: **14**
Latitude: **52**
Continuous Emissions Recorder? (Y/N): **No**
GEP Building Height [ft]: **42.00**
GEP Building Length [ft]: **630.00**
GEP Building Width [ft]: **350.00**

Shape: **Rectangle**
Emissions Egress Point Cross Sectional Area [sq ft]: **64**
Emissions Egress Point Height [ft]: **28.00**
Emissions Egress Point Diameter [ft]: **9.03**
Exit Gas Temperature at Maximum Operation [° F]: **180**
Exit Gas Temperature at Average Operation [° F]: **120**
Exit Gas Flow at Maximum Operation [acfm]: **148,800**
Exit Gas Flow at Average Operation [acfm]: **125,000**
Emission Egress Point Base Elevation [ft]: **764**
Release Height [ft]:
Plume Temperature [° F]:
Area of Emissions [sq ft]:

Confidential Claims

20. Complete the table below:

Confidential item:

Basis for confidentiality claim:

State of Ohio Environmental Protection Agency

Facility Name: **Clow Water Systems Company**
Facility ID: **06-16-01-0006**
Title: **2003-K002**

Emissions Reporting Form: Emissions Unit Information

General Information

1. Emissions form(s): ☒ **Emissions fee report** ☐ Emissions statement ☒ **Emissions inventory**

2. Reporting period: **2003**

3. OEPA ID(s): **FITTINGS PAINTING (K002)**

4. Annual operating hours: **2,023**

SCC Information

5. Select an SCC ID and complete the table below:

SCC ID: **4-02-001-10**

User Description for SCC (optional): **ASPHALTIC COATING**
SCC operating rate units: **Gallons of Coating**
SCC Annual Operating Rate [SCC Units]: **2,990.00000** Ash [%]: **0.00**
Maximum Hourly Operating Rate [SCC Units]: **10.000** Sulfur [%]: **0.00**
SCC Comments:

SCC ID: **4-02-001-10**

User Description for SCC (optional): **MINERAL SPIRITS**
SCC operating rate units: **Gallons of Coating**
SCC Annual Operating Rate [SCC Units]: **129.00000** Ash [%]: **0.00**
Maximum Hourly Operating Rate [SCC Units]: **1.000** Sulfur [%]: **0.00**
SCC Comments: **Note: Mineral Spirits are used strictly for clean-up media.**

SCC ID: **4-02-001-10**

User Description for SCC (optional): **SPECIAL COATINGS**
SCC operating rate units: **Gallons of Coating**
SCC Annual Operating Rate [SCC Units]: **571.00000** Ash [%]:
Maximum Hourly Operating Rate [SCC Units]: **1.000** Sulfur [%]:
SCC Comments:

6. Emissions information:

SCC ID: **4-02-001-10** Pollutant ID: **Organic compounds**

Emissions Method Description: **Other**

Auto-calculate Emissions? (Y/N): **No**

Primary Control Equipment Description: **No Control Method**

Year Installed (Primary):

Secondary Control Equipment Description: **No Control Method**

Year Installed (Secondary):

Control System Capture Efficiency:

Control Device Efficiency:

Overall Device Efficiency: **0.00**

Annual Adjustment Factor: **0.00**

Supporting Emissions Calculation Data:

See "2003 FER calcs.xls".

Overall Efficiency Method: **Not applicable**

Emissions Factor:

Emissions Factor Units:

Factor Controlled? (Y/N):

Emissions Factor Operating Rate:

Emissions Factor Operating Rate Units:

Emissions [tons/yr]: **5.06**

SCC ID: **4-02-001-10** Pollutant ID: **PM =< 10 microns**

Emissions Method Description: **Other**

Auto-calculate Emissions? (Y/N): **No**

Primary Control Equipment Description: **Fabric Filter Low Temperature**

Year Installed (Primary): **1993**

Secondary Control Equipment Description: **No Control Method**

Year Installed (Secondary):

Control System Capture Efficiency:

Control Device Efficiency:

Overall Device Efficiency: **90.00**

Annual Adjustment Factor:

Supporting Emissions Calculation Data:

See "2003 FER calcs.xls".

Overall Efficiency Method: **Design**

Emissions Factor:

Emissions Factor Units:

Factor Controlled? (Y/N):

Emissions Factor Operating Rate:

Emissions Factor Operating Rate Units:

Emissions [tons/yr]: **0.28**

6. Emissions information: (continued)

SCC ID: **4-02-001-10** Pollutant ID: **PM =< 2.5 microns**

Emissions Method Description: **Other**

Auto-calculate Emissions? (Y/N): **No**

Primary Control Equipment Description: **Fabric Filter Low Temperature**

Year Installed (Primary): **1993**

Secondary Control Equipment Description: **No Control Method**

Year Installed (Secondary):

Control System Capture Efficiency:

Control Device Efficiency:

Overall Device Efficiency: **90.00**

Annual Adjustment Factor: **0.00**

Supporting Emissions Calculation Data:

See "2003 FER calcs.xls".

Overall Efficiency Method: **Design**

Emissions Factor:

Emissions Factor Units:

Factor Controlled? (Y/N):

Emissions Factor Operating Rate:

Emissions Factor Operating Rate Units:

Emissions [tons/yr]: **0.23**

SCC ID: **4-02-001-10** Pollutant ID: **Particulate Matter**

Emissions Method Description: **Other**

Auto-calculate Emissions? (Y/N): **No**

Primary Control Equipment Description: **Fabric Filter Low Temperature**

Year Installed (Primary): **1993**

Secondary Control Equipment Description: **No Control Method**

Year Installed (Secondary):

Control System Capture Efficiency:

Control Device Efficiency:

Overall Device Efficiency: **90.00**

Annual Adjustment Factor: **0.00**

Supporting Emissions Calculation Data:

See "2003 FER calcs.xls".

Overall Efficiency Method: **Design**

Emissions Factor:

Emissions Factor Units:

Factor Controlled? (Y/N):

Emissions Factor Operating Rate:

Emissions Factor Operating Rate Units:

Emissions [tons/yr]: **0.30**

6. Emissions information: (continued)

SCC ID: **4-02-001-10** Pollutant ID: **Volatile organic compounds**

Emissions Method Description: **Other**

Auto-calculate Emissions? (Y/N): **No**

Primary Control Equipment Description: **No Control Method**

Year Installed (Primary):

Secondary Control Equipment Description: **No Control Method**

Year Installed (Secondary):

Control System Capture Efficiency:

Control Device Efficiency:

Overall Device Efficiency: **0.00**

Annual Adjustment Factor: **0.00**

Supporting Emissions Calculation Data:

See "2003 FER calcs.xls".

Overall Efficiency Method: **Not applicable**

Emissions Factor:

Emissions Factor Units:

Factor Controlled? (Y/N):

Emissions Factor Operating Rate:

Emissions Factor Operating Rate Units:

Emissions [tons/yr]: **5.06**

SCC ID: **4-02-001-10** Pollutant ID: **Organic compounds**

Emissions Method Description: **Other**

Auto-calculate Emissions? (Y/N): **No**

Primary Control Equipment Description: **No Control Method**

Year Installed (Primary):

Secondary Control Equipment Description: **No Control Method**

Year Installed (Secondary):

Control System Capture Efficiency:

Control Device Efficiency:

Overall Device Efficiency: **0.00**

Annual Adjustment Factor: **0.00**

Supporting Emissions Calculation Data:

See "2003 FER calcs.xls".

Overall Efficiency Method: **Not applicable**

Emissions Factor:

Emissions Factor Units:

Factor Controlled? (Y/N):

Emissions Factor Operating Rate:

Emissions Factor Operating Rate Units:

Emissions [tons/yr]: **0.41**

6. Emissions information: (continued)

SCC ID: **4-02-001-10** Pollutant ID: **Volatile organic compounds**

Emissions Method Description: **Other**

Auto-calculate Emissions? (Y/N): **No**

Primary Control Equipment Description: **No Control Method**

Year Installed (Primary):

Secondary Control Equipment Description: **No Control Method**

Year Installed (Secondary):

Control System Capture Efficiency:

Control Device Efficiency:

Overall Device Efficiency: **0.00**

Annual Adjustment Factor: **0.00**

Supporting Emissions Calculation Data:

See "2003 FER calcs.xls".

Overall Efficiency Method: **Not applicable**

Emissions Factor:

Emissions Factor Units:

Factor Controlled? (Y/N):

Emissions Factor Operating Rate:

Emissions Factor Operating Rate Units:

Emissions [tons/yr]: **0.41**

SCC ID: **4-02-001-10** Pollutant ID: **Organic compounds**

Emissions Method Description: **Other**

Auto-calculate Emissions? (Y/N): **No**

Primary Control Equipment Description: **No Control Method**

Year Installed (Primary):

Secondary Control Equipment Description: **No Control Method**

Year Installed (Secondary):

Control System Capture Efficiency:

Control Device Efficiency:

Overall Device Efficiency: **0.00**

Annual Adjustment Factor: **0.00**

Supporting Emissions Calculation Data:

See "2003 FER calcs.xls".

Overall Efficiency Method: **Not applicable**

Emissions Factor:

Emissions Factor Units:

Factor Controlled? (Y/N):

Emissions Factor Operating Rate:

Emissions Factor Operating Rate Units:

Emissions [tons/yr]: **0.83**

6. Emissions information: (continued)

SCC ID: **4-02-001-10** Pollutant ID: **PM =< 10 microns**

Emissions Method Description: **Other**

Auto-calculate Emissions? (Y/N): **No**

Primary Control Equipment Description: **Fabric Filter Low Temperature**

Year Installed (Primary): **1993**

Secondary Control Equipment Description: **No Control Method**

Year Installed (Secondary):

Control System Capture Efficiency:

Control Device Efficiency:

Overall Device Efficiency: **90.00**

Annual Adjustment Factor: **0.00**

Supporting Emissions Calculation Data:

See "2003 FER calcs.xls".

Overall Efficiency Method: **Design**

Emissions Factor:

Emissions Factor Units:

Factor Controlled? (Y/N):

Emissions Factor Operating Rate:

Emissions Factor Operating Rate Units:

Emissions [tons/yr]: **0.13**

SCC ID: **4-02-001-10** Pollutant ID: **PM =< 2.5 microns**

Emissions Method Description: **Other**

Auto-calculate Emissions? (Y/N): **No**

Primary Control Equipment Description: **Fabric Filter Low Temperature**

Year Installed (Primary): **1993**

Secondary Control Equipment Description: **No Control Method**

Year Installed (Secondary):

Control System Capture Efficiency:

Control Device Efficiency:

Overall Device Efficiency: **90.00**

Annual Adjustment Factor: **0.00**

Supporting Emissions Calculation Data:

See "2003 FER calcs.xls".

Overall Efficiency Method: **Design**

Emissions Factor:

Emissions Factor Units:

Factor Controlled? (Y/N):

Emissions Factor Operating Rate:

Emissions Factor Operating Rate Units:

Emissions [tons/yr]: **0.11**

6. Emissions information: (continued)

SCC ID: **4-02-001-10** Pollutant ID: **Particulate Matter**

Emissions Method Description: **Other**

Auto-calculate Emissions? (Y/N): **No**

Primary Control Equipment Description: **Fabric Filter Low Temperature**

Year Installed (Primary): **1993**

Secondary Control Equipment Description: **No Control Method**

Year Installed (Secondary):

Control System Capture Efficiency:

Control Device Efficiency:

Overall Device Efficiency: **90.00**

Annual Adjustment Factor: **0.00**

Supporting Emissions Calculation Data:

See "2003 FER calcs.xls".

Overall Efficiency Method: **Design**

Emissions Factor:

Emissions Factor Units:

Factor Controlled? (Y/N):

Emissions Factor Operating Rate:

Emissions Factor Operating Rate Units:

Emissions [tons/yr]: **0.14**

SCC ID: **4-02-001-10** Pollutant ID: **Volatile organic compounds**

Emissions Method Description: **Other**

Auto-calculate Emissions? (Y/N): **No**

Primary Control Equipment Description: **No Control Method**

Year Installed (Primary):

Secondary Control Equipment Description: **No Control Method**

Year Installed (Secondary):

Control System Capture Efficiency:

Control Device Efficiency:

Overall Device Efficiency: **0.00**

Annual Adjustment Factor: **0.00**

Supporting Emissions Calculation Data:

See "2003 FER calcs.xls".

Overall Efficiency Method: **Not applicable**

Emissions Factor:

Emissions Factor Units:

Factor Controlled? (Y/N):

Emissions Factor Operating Rate:

Emissions Factor Operating Rate Units:

Emissions [tons/yr]: **0.83**

7. Summary for all SCC IDs:

SCC ID	PART	SO2	NOx	CO	OC	VOC	Hg	Pb	As	Bz
4-02-001-10	0.44	0	0	0	6.3	6.3	0	0	0	0
Totals:	0.44	0	0	0	6.3	6.3	0	0	0	0

Schedule

8. Boiler design capacity/heat input: **0.00** (MMBtu/hr)

9. Space heat: **0.00** (%)

10. Annual throughput:

December - February: **25.00** (%)
March - May: **25.00** (%)
June - August: **25.00** (%)
September - November: **25.00** (%)

11. Normal operating schedule

Hours/day: **8**
Days/week: **5**
Weeks/year: **50**

12. Peak ozone season daily emissions rate:

VOC: **34.240** (lbs/day)
NOx: **0.000** (lbs/day)
☒ **Autocalculated**

Inventory

13. Construction date: **6/65**

14. Modification date: **5/98**

15. Shutdown date:

16. Emissions unit comments (optional):

17. Federally-enforceable operating restrictions:

Point Information

18. Emissions point centroid location:

○ UTM	Zone	Vertical	Horizontal	● Lat/Long	Degrees	Minutes	Seconds
	17	4452.45	426.75	Latitude:	40	14	44
				Longitude:	81	51	40

19. Associated emissions egress point:

Emissions Egress Point ID: **53K002.F2**

Emissions Egress Point Type: **Horizontal**
Geographical Preference: **Lat/Long**
UTM Zone: **17**
UTM Vertical: **4,452.45**
UTM Horizontal: **426.75**
Longitude: **81**
Longitude: **51**
Longitude: **40**
Latitude: **40**
Latitude: **14**
Latitude: **44**
Continuous Emissions Recorder? (Y/N): **No**
GEP Building Height [ft]: **31.00**
GEP Building Length [ft]: **515.00**
GEP Building Width [ft]: **150.00**

Shape: **Round**
Emissions Egress Point Cross Sectional Area [sq ft]: **3**
Emissions Egress Point Height [ft]: **11.50**
Emissions Egress Point Diameter [ft]: **2.00**
Exit Gas Temperature at Maximum Operation [° F]: **70**
Exit Gas Temperature at Average Operation [° F]: **70**
Exit Gas Flow at Maximum Operation [acfm]: **7,670**
Exit Gas Flow at Average Operation [acfm]: **7,670**
Emission Egress Point Base Elevation [ft]: **764**
Release Height [ft]:
Plume Temperature [° F]:
Area of Emissions [sq ft]:

Confidential Claims

20. Complete the table below:

Confidential item:	Basis for confidentiality claim:

State of Ohio Environmental Protection Agency

Facility Name: **Clow Water Systems Company**
Facility ID: **06-16-01-0006**
Title: **2003-K006**

Emissions Reporting Form: Emissions Unit Information

General Information

1. Emissions form(s): ☒ **Emissions fee report** ☐ Emissions statement ☒ **Emissions inventory**

2. Reporting period: **2003**

3. OEPA ID(s): **PIPE PAINT OPERATION (K006)**

4. Annual operating hours: **2,300**

SCC Information

5. Select an SCC ID and complete the table below:

SCC ID: **4-02-001-10**

User Description for SCC (optional): **ASPHALT COATING**

SCC operating rate units: **Gallons of Coating**

SCC Annual Operating Rate [SCC Units]: **77,569.00000** Ash [%]: **0.00**

Maximum Hourly Operating Rate [SCC Units]: **100.000** Sulfur [%]: **0.00**

SCC Comments:

SCC ID: **4-02-001-10**

User Description for SCC (optional): **MINERAL SPIRITS**

SCC operating rate units: **Gallons of Coating**

SCC Annual Operating Rate [SCC Units]: **7,329.00000** Ash [%]: **0.00**

Maximum Hourly Operating Rate [SCC Units]: **10.000** Sulfur [%]: **0.00**

SCC Comments: **Note: Mineral Spirits are used strictly as clean-up media.**

6. Emissions information:

SCC ID: **4-02-001-10** Pollutant ID: **Organic compounds**

Emissions Method Description: **Other**

Auto-calculate Emissions? (Y/N): **No**

Primary Control Equipment Description: **No Control Method**

Year Installed (Primary):

Secondary Control Equipment Description: **No Control Method**

Year Installed (Secondary):

Control System Capture Efficiency:

Control Device Efficiency:

Overall Device Efficiency: **0.00**

Annual Adjustment Factor: **0.00**

Supporting Emissions Calculation Data:

See "FER 2003 calcs.xls"

Overall Efficiency Method: **Not applicable**

Emissions Factor:

Emissions Factor Units:

Factor Controlled? (Y/N):

Emissions Factor Operating Rate:

Emissions Factor Operating Rate Units:

Emissions [tons/yr]: **0.00**

6. Emissions information: (continued)

SCC ID: **4-02-001-10** Pollutant ID: **PM =< 10 microns**

Emissions Method Description: **Other**

Auto-calculate Emissions? (Y/N): **No**

Primary Control Equipment Description: **Fabric Filter Low Temperature**

Year Installed (Primary): **1997**

Secondary Control Equipment Description: **No Control Method**

Year Installed (Secondary):

Control System Capture Efficiency:

Control Device Efficiency:

Overall Device Efficiency: **99.50**

Annual Adjustment Factor: **0.00**

Supporting Emissions Calculation Data:

See "FER 2003 calcs.xls"

Overall Efficiency Method: **Design**

Emissions Factor:

Emissions Factor Units:

Factor Controlled? (Y/N):

Emissions Factor Operating Rate:

Emissions Factor Operating Rate Units:

Emissions [tons/yr]: **0.18**

SCC ID: **4-02-001-10** Pollutant ID: **PM =< 2.5 microns**

Emissions Method Description: **Other**

Auto-calculate Emissions? (Y/N): **No**

Primary Control Equipment Description: **Fabric Filter Low Temperature**

Year Installed (Primary): **1997**

Secondary Control Equipment Description: **No Control Method**

Year Installed (Secondary):

Control System Capture Efficiency:

Control Device Efficiency:

Overall Device Efficiency: **99.50**

Annual Adjustment Factor: **0.00**

Supporting Emissions Calculation Data:

See "FER 2003 calcs.xls"

Overall Efficiency Method: **Design**

Emissions Factor:

Emissions Factor Units:

Factor Controlled? (Y/N):

Emissions Factor Operating Rate:

Emissions Factor Operating Rate Units:

Emissions [tons/yr]: **0.15**

6. Emissions information: (continued)

SCC ID: **4-02-001-10** Pollutant ID: **Particulate Matter**

Emissions Method Description: **Other**

Auto-calculate Emissions? (Y/N): **No**

Primary Control Equipment Description: **Fabric Filter Low Temperature**

Year Installed (Primary): **1997**

Secondary Control Equipment Description: **No Control Method**

Year Installed (Secondary):

Control System Capture Efficiency:

Control Device Efficiency:

Overall Device Efficiency: **99.50**

Annual Adjustment Factor: **0.00**

Supporting Emissions Calculation Data:

See "FER 2003 calcs.xls"

Overall Efficiency Method: **Design**

Emissions Factor:

Emissions Factor Units:

Factor Controlled? (Y/N):

Emissions Factor Operating Rate:

Emissions Factor Operating Rate Units:

Emissions [tons/yr]: **0.20**

SCC ID: **4-02-001-10** Pollutant ID: **Volatile organic compounds**

Emissions Method Description: **Other**

Auto-calculate Emissions? (Y/N): **No**

Primary Control Equipment Description: **No Control Method**

Year Installed (Primary):

Secondary Control Equipment Description: **No Control Method**

Year Installed (Secondary):

Control System Capture Efficiency:

Control Device Efficiency:

Overall Device Efficiency: **0.00**

Annual Adjustment Factor: **0.00**

Supporting Emissions Calculation Data:

See "FER 2003 calcs.xls"

Overall Efficiency Method: **Not applicable**

Emissions Factor:

Emissions Factor Units:

Factor Controlled? (Y/N):

Emissions Factor Operating Rate:

Emissions Factor Operating Rate Units:

Emissions [tons/yr]: **0.00**

6. Emissions information: (continued)

SCC ID: **4-02-001-10** Pollutant ID: **Organic compounds**

Emissions Method Description: **Other**

Auto-calculate Emissions? (Y/N): **No**

Primary Control Equipment Description: **No Control Method**

Year Installed (Primary):

Secondary Control Equipment Description: **No Control Method**

Year Installed (Secondary):

Control System Capture Efficiency:

Control Device Efficiency:

Overall Device Efficiency: **0.00**

Annual Adjustment Factor: **0.00**

Supporting Emissions Calculation Data:

See "FER 2003 calcs.xls"

Overall Efficiency Method: **Not applicable**

Emissions Factor:

Emissions Factor Units:

Factor Controlled? (Y/N):

Emissions Factor Operating Rate:

Emissions Factor Operating Rate Units:

Emissions [tons/yr]: **23.45**

SCC ID: **4-02-001-10** Pollutant ID: **Volatile organic compounds**

Emissions Method Description: **Other**

Auto-calculate Emissions? (Y/N): **No**

Primary Control Equipment Description: **No Control Method**

Year Installed (Primary):

Secondary Control Equipment Description: **No Control Method**

Year Installed (Secondary):

Control System Capture Efficiency:

Control Device Efficiency:

Overall Device Efficiency: **0.00**

Annual Adjustment Factor: **0.00**

Supporting Emissions Calculation Data:

See "FER 2003 calcs.xls"

Overall Efficiency Method: **Not applicable**

Emissions Factor:

Emissions Factor Units:

Factor Controlled? (Y/N):

Emissions Factor Operating Rate:

Emissions Factor Operating Rate Units:

Emissions [tons/yr]: **23.45**

7. Summary for all SCC IDs:

SCC ID	PART	SO2	NOx	CO	OC	VOC	Hg	Pb	As	Bz
4-02-001-10	0.2	0	0	0	23.45	23.45	0	0	0	0
Totals:	0.2	0	0	0	23.45	23.45	0	0	0	0

Schedule

8. Boiler design capacity/heat input: **0.00** (MMBtu/hr)

9. Space heat: **0.00** (%)

10. Annual throughput:

December - February: **25.00** (%)
March - May: **25.00** (%)
June - August: **25.00** (%)
September - November: **25.00** (%)

11. Normal operating schedule

Hours/day: **8**
Days/week: **5**
Weeks/year: **50**

12. Peak ozone season daily emissions rate:

VOC: **127.450** (lbs/day)
NOx: **0.000** (lbs/day)
☒ **Autocalculated**

Inventory

13. Construction date: **6/60**

14. Modification date: **8/93**

15. Shutdown date:

16. Emissions unit comments (optional):

17. Federally-enforceable operating restrictions:

Point Information

18. Emissions point centroid location:

○ UTM	Zone	Vertical	Horizontal	● Lat/Long		Degrees	Minutes	Seconds
	17	**4452.70**	**426.68**		Latitude:	**40**	**14**	**52**
					Longitude:	**81**	**51**	**43**

19. Associated emissions egress point:

Emissions Egress Point ID: **33K006.H2**

Emissions Egress Point Type: **Vertical - obstructed**
Geographical Preference: **Lat/Long**
UTM Zone: **17**
UTM Vertical: **4,452.70**
UTM Horizontal: **426.68**
Longitude: **81**
Longitude: **51**
Longitude: **43**
Latitude: **40**
Latitude: **14**
Latitude: **52**
Continuous Emissions Recorder? (Y/N): **No**
GEP Building Height [ft]: **17.00**
GEP Building Length [ft]: **630.00**
GEP Building Width [ft]: **350.00**

Shape: **Round**
Emissions Egress Point Cross Sectional Area [sq ft]: **3**
Emissions Egress Point Height [ft]: **19.00**
Emissions Egress Point Diameter [ft]: **2.00**
Exit Gas Temperature at Maximum Operation [° F]: **70**
Exit Gas Temperature at Average Operation [° F]: **70**
Exit Gas Flow at Maximum Operation [acfm]: **11,250**
Exit Gas Flow at Average Operation [acfm]: **10,500**
Emission Egress Point Base Elevation [ft]: **763**
Release Height [ft]:
Plume Temperature [° F]:
Area of Emissions [sq ft]:

Confidential Claims

20. Complete the table below:

Confidential item:	Basis for confidentiality claim:

State of Ohio Environmental Protection Agency

Facility Name: **Clow Water Systems Company**
Facility ID: **06-16-01-0006**
Title: **2003-K007**

Emissions Reporting Form: Emissions Unit Information

General Information

1. Emissions form(s): ☒ **Emissions fee report** ☐ Emissions statement ☒ **Emissions inventory**

2. Reporting period: **2003**

3. OEPA ID(s): **CORE WASH - MAIN FLOOR & LOOP (K007)**

4. Annual operating hours: **2,023**

SCC Information

5. Select an SCC ID and complete the table below:

SCC ID: **3-04-003-98**

User Description for SCC (optional): **Core wash**

SCC operating rate units: **Gallons**

SCC Annual Operating Rate [SCC Units]: **6,019.00000**

Ash [%]:

Maximum Hourly Operating Rate [SCC Units]: **0.010**

Sulfur [%]:

SCC Comments:

6. Emissions information:

SCC ID: **3-04-003-98** Pollutant ID: **Organic compounds**

Emissions Method Description: **Other**

Overall Efficiency Method: **Not applicable**

Auto-calculate Emissions? (Y/N): **No**

Emissions Factor:

Emissions Factor Units:

Primary Control Equipment Description: **No Control Method**

Year Installed (Primary):

Factor Controlled? (Y/N):

Secondary Control Equipment Description: **No Control Method**

Emissions Factor Operating Rate:

Year Installed (Secondary):

Control System Capture Efficiency:

Emissions Factor Operating Rate Units:

Control Device Efficiency:

Overall Device Efficiency: **0.00**

Annual Adjustment Factor: **0.00**

Emissions [tons/yr]: **14.60**

Supporting Emissions Calculation Data:

See "2003 FER calcs.xls".

7. Summary for all SCC IDs:

SCC ID	PART	SO2	NOx	CO	OC	VOC	Hg	Pb	As	Bz
3-04-003-98	0	0	0	0	14.6	0	0	0	0	0
Totals:	0	0	0	0	14.6	0	0	0	0	0

Schedule

8. Boiler design capacity/heat input: **0.00** (MMBtu/hr)

9. Space heat: **0.00** (%)

10. Annual throughput:

December - February: **25.00** (%)
March - May: **25.00** (%)
June - August: **25.00** (%)
September - November: **25.00** (%)

11. Normal operating schedule

Hours/day: **8**
Days/week: **5**
Weeks/year: **50**

12. Peak ozone season daily emissions rate:

VOC: **0.000** (lbs/day)
NOx: **0.000** (lbs/day)

☒ **Autocalculated**

Inventory

13. Construction date: **9/97**

14. Modification date:

15. Shutdown date:

16. Emissions unit comments (optional):

17. Federally-enforceable operating restrictions:

Point Information

18. Emissions point centroid location:

○ UTM	Zone	Vertical	Horizontal	● Lat/Long		Degrees	Minutes	Seconds
	17	4452.60	426.80		Latitude:	40	14	49
					Longitude:	81	51	38

19. Associated emissions egress point:

Emissions Egress Point ID: **40FAN .B8**

Emissions Egress Point Type: **Vertical**
Geographical Preference: **Lat/Long**
UTM Zone: **17**
UTM Vertical: **4,452.60**
UTM Horizontal: **426.80**
Longitude: **81**
Longitude: **51**
Longitude: **38**
Latitude: **40**
Latitude: **14**
Latitude: **49**
Continuous Emissions Recorder? (Y/N): **No**
GEP Building Height [ft]: **42.00**
GEP Building Length [ft]: **630.00**
GEP Building Width [ft]: **350.00**

Shape: **Round**
Emissions Egress Point Cross Sectional Area [sq ft]: **27**
Emissions Egress Point Height [ft]: **31.27**
Emissions Egress Point Diameter [ft]: **5.92**
Exit Gas Temperature at Maximum Operation [° F]: **70**
Exit Gas Temperature at Average Operation [° F]: **70**
Exit Gas Flow at Maximum Operation [acfm]: **54,000**
Exit Gas Flow at Average Operation [acfm]: **54,000**
Emission Egress Point Base Elevation [ft]: **765**
Release Height [ft]:
Plume Temperature [° F]:
Area of Emissions [sq ft]:

Confidential Claims

20. Complete the table below:

Confidential item:	Basis for confidentiality claim:

State of Ohio Environmental Protection Agency

Facility Name: **Clow Water Systems Company**
Facility ID: **06-16-01-0006**
Title: **2003-K008**

Emissions Reporting Form: Emissions Unit Information

General Information

1. Emissions form(s): ☒ **Emissions fee report** ☐ Emissions statement ☒ **Emissions inventory**

2. Reporting period: **2003**

3. OEPA ID(s): **MOLD WASH - MAIN FLOOR & CIRCUIT (K008)**

4. Annual operating hours: **2,023**

SCC Information

5. Select an SCC ID and complete the table below:

SCC ID: **3-04-003-98**

User Description for SCC (optional): **Mold Wash**

SCC operating rate units: **Gallons**

SCC Annual Operating Rate [SCC Units]: **1,095.00000**

Ash [%]:

Maximum Hourly Operating Rate [SCC Units]: **1.000**

Sulfur [%]:

SCC Comments:

6. Emissions information:

SCC ID: **3-04-003-98** Pollutant ID: **Organic compounds**

Emissions Method Description: **Other**

Overall Efficiency Method: **Not applicable**

Auto-calculate Emissions? (Y/N): **No**

Emissions Factor:

Emissions Factor Units:

Primary Control Equipment Description: **No Control Method**

Year Installed (Primary):

Factor Controlled? (Y/N):

Secondary Control Equipment Description: **No Control Method**

Emissions Factor Operating Rate:

Year Installed (Secondary):

Emissions Factor Operating Rate Units:

Control System Capture Efficiency:

Control Device Efficiency:

Overall Device Efficiency: **0.00**

Annual Adjustment Factor: **0.00**

Emissions [tons/yr]: **2.66**

Supporting Emissions Calculation Data:

See "FER 2003 calcs.xls".

6. Emissions information: (continued)

SCC ID: **3-04-003-98** Pollutant ID: **Volatile organic compounds**

Emissions Method Description: **Other**

Auto-calculate Emissions? (Y/N): **No**

Primary Control Equipment Description: **No Control Method**

Year Installed (Primary):

Secondary Control Equipment Description: **No Control Method**

Year Installed (Secondary):

Control System Capture Efficiency:

Control Device Efficiency:

Overall Device Efficiency: **0.00**

Annual Adjustment Factor: **0.00**

Supporting Emissions Calculation Data:

See "FER 2003 calcs.xls".

Overall Efficiency Method: **Not applicable**

Emissions Factor:

Emissions Factor Units:

Factor Controlled? (Y/N):

Emissions Factor Operating Rate:

Emissions Factor Operating Rate Units:

Emissions [tons/yr]: **2.66**

7. Summary for all SCC IDs:

SCC ID	PART	SO2	NOx	CO	OC	VOC	Hg	Pb	As	Bz
3-04-003-98	0	0	0	0	2.66	2.66	0	0	0	0
Totals:	0	0	0	0	2.66	2.66	0	0	0	0

Schedule

8. Boiler design capacity/heat input: **0.00** (MMBtu/hr)

9. Space heat: **0.00** (%)

10. Annual throughput:

December - February: **25.00** (%)

March - May: **25.00** (%)

June - August: **25.00** (%)

September - November: **25.00** (%)

11. Normal operating schedule

Hours/day: **8**

Days/week: **5**

Weeks/year: **50**

12. Peak ozone season daily emissions rate:

VOC: **14.460** (lbs/day)

NOx: **0.000** (lbs/day)

☒ **Autocalculated**

Inventory

13. Construction date: **6/72**

14. Modification date:

15. Shutdown date:

16. Emissions unit comments (optional):

17. Federally-enforceable operating restrictions:

Point Information

18. Emissions point centroid location:

○ UTM	Zone	Vertical	Horizontal	● Lat/Long		Degrees	Minutes	Seconds
	17	4452.60	426.80		Latitude:	40	14	49
					Longitude:	81	51	38

19. Associated emissions egress point:

Emissions Egress Point ID: **40FAN .B8**

Emissions Egress Point Type: **Vertical**
Geographical Preference: **Lat/Long**
UTM Zone: **17**
UTM Vertical: **4,452.60**
UTM Horizontal: **426.80**
Longitude: **81**
Longitude: **51**
Longitude: **38**
Latitude: **40**
Latitude: **14**
Latitude: **49**
Continuous Emissions Recorder? (Y/N): **No**
GEP Building Height [ft]: **42.00**
GEP Building Length [ft]: **630.00**
GEP Building Width [ft]: **350.00**

Shape: **Round**
Emissions Egress Point Cross Sectional Area [sq ft]: **27**
Emissions Egress Point Height [ft]: **31.27**
Emissions Egress Point Diameter [ft]: **5.92**
Exit Gas Temperature at Maximum Operation [° F]: **70**
Exit Gas Temperature at Average Operation [° F]: **70**
Exit Gas Flow at Maximum Operation [acfm]: **54,000**
Exit Gas Flow at Average Operation [acfm]: **54,000**
Emission Egress Point Base Elevation [ft]: **765**
Release Height [ft]:
Plume Temperature [° F]:
Area of Emissions [sq ft]:

Confidential Claims

20. Complete the table below:

Confidential item:

Basis for confidentiality claim:

State of Ohio Environmental Protection Agency

Facility Name: **Clow Water Systems Company**
Facility ID: **06-16-01-0006**
Title: **2003-P007**

Emissions Reporting Form: Emissions Unit Information

General Information

1. Emissions form(s): ☒ **Emissions fee report** ☐ Emissions statement ☒ **Emissions inventory**

2. Reporting period: **2003**

3. OEPA ID(s): **MAIN SAND PLANT (P007)**

4. Annual operating hours: **2,023**

SCC Information

5. Select an SCC ID and complete the table below:

SCC ID: **3-04-003-50**

User Description for SCC (optional):

SCC operating rate units: **Tons Sand Handled**

SCC Annual Operating Rate [SCC Units]: **43,137.00000**

Ash [%]:

Maximum Hourly Operating Rate [SCC Units]: **45.000**

Sulfur [%]:

SCC Comments:

6. Emissions information:

SCC ID: **3-04-003-50** Pollutant ID: **PM =< 10 microns**

Emissions Method Description: **Other**

Overall Efficiency Method: **Design**

Auto-calculate Emissions? (Y/N): **No**

Emissions Factor:

Emissions Factor Units:

Primary Control Equipment Description: **Fabric Filter Low Temperature**

Year Installed (Primary): **1968**

Factor Controlled? (Y/N):

Secondary Control Equipment Description: **No Control Method**

Emissions Factor Operating Rate:

Year Installed (Secondary):

Emissions Factor Operating Rate Units:

Control System Capture Efficiency:

Control Device Efficiency:

Overall Device Efficiency: **99.90**

Annual Adjustment Factor: **0.00**

Emissions [tons/yr]: **0.02**

Supporting Emissions Calculation Data:

See "FER 2003 calcs.xls". Stack emissions from the baghouse associated with this emission unit are reported with F007.

6. Emissions information: (continued)

SCC ID: **3-04-003-50** Pollutant ID: **PM =< 2.5 microns**

Emissions Method Description: **Other**

Auto-calculate Emissions? (Y/N): **No**

Primary Control Equipment Description: **Fabric Filter Low Temperature**

Year Installed (Primary): **1968**

Secondary Control Equipment Description: **No Control Method**

Year Installed (Secondary):

Control System Capture Efficiency:

Control Device Efficiency:

Overall Device Efficiency: **99.90**

Annual Adjustment Factor: **0.00**

Overall Efficiency Method: **Design**

Emissions Factor:

Emissions Factor Units:

Factor Controlled? (Y/N):

Emissions Factor Operating Rate:

Emissions Factor Operating Rate Units:

Emissions [tons/yr]: **0.01**

Supporting Emissions Calculation Data:

See "FER 2003 calcs.xls". Stack emissions from the baghouse associated with this emission unit are reported with F007.

SCC ID: **3-04-003-50** Pollutant ID: **Particulate Matter**

Emissions Method Description: **Other**

Auto-calculate Emissions? (Y/N): **No**

Primary Control Equipment Description: **Fabric Filter Low Temperature**

Year Installed (Primary): **1968**

Secondary Control Equipment Description: **No Control Method**

Year Installed (Secondary):

Control System Capture Efficiency:

Control Device Efficiency:

Overall Device Efficiency: **99.99**

Annual Adjustment Factor: **0.00**

Overall Efficiency Method: **Design**

Emissions Factor:

Emissions Factor Units:

Factor Controlled? (Y/N):

Emissions Factor Operating Rate:

Emissions Factor Operating Rate Units:

Emissions [tons/yr]: **0.12**

Supporting Emissions Calculation Data:

See "FER 2003 calcs.xls". Stack emissions from the baghouse associated with this emission unit are reported with F007.

7. Summary for all SCC IDs:

SCC ID	PART	SO2	NOx	CO	OC	VOC	Hg	Pb	As	Bz
3-04-003-50	0.12	0	0	0	0	0	0	0	0	0
Totals:	0.12	0	0	0	0	0	0	0	0	0

Schedule

8. Boiler design capacity/heat input: **0.00** (MMBtu/hr)

9. Space heat: **0.00** (%)

10. Annual throughput:

December - February: **25.00** (%)
March - May: **25.00** (%)
June - August: **25.00** (%)
September - November: **25.00** (%)

11. Normal operating schedule

Hours/day: **8**
Days/week: **5**
Weeks/year: **50**

12. Peak ozone season daily emissions rate:

VOC: **0.000** (lbs/day)
NOx: **0.000** (lbs/day)
☒ **Autocalculated**

Inventory

13. Construction date: **6/68**

14. Modification date: **6/00**

15. Shutdown date:

16. Emissions unit comments (optional):

17. Federally-enforceable operating restrictions:

Point Information

18. Emissions point centroid location:

○ UTM	Zone	Vertical	Horizontal	● Lat/Long		Degrees	Minutes	Seconds
	17	4452.67	426.71		Latitude:	40	14	51
					Longitude:	81	51	42

19. Associated emissions egress point:

Emissions Egress Point ID: **03F004.B6**

Emissions Egress Point Type: **Vertical**
Geographical Preference: **Lat/Long**
UTM Zone: **17**
UTM Vertical: **4,452.67**
UTM Horizontal: **426.71**
Longitude: **81**
Longitude: **51**
Longitude: **42**
Latitude: **40**
Latitude: **14**
Latitude: **51**
Continuous Emissions Recorder? (Y/N):
GEP Building Height [ft]:
GEP Building Length [ft]:
GEP Building Width [ft]:

Shape: **Round**
Emissions Egress Point Cross Sectional Area [sq ft]: **20**
Emissions Egress Point Height [ft]: **11.25**
Emissions Egress Point Diameter [ft]: **5.15**
Exit Gas Temperature at Maximum Operation [° F]: **150**
Exit Gas Temperature at Average Operation [° F]: **120**
Exit Gas Flow at Maximum Operation [acfm]: **96,000**
Exit Gas Flow at Average Operation [acfm]: **96,000**
Emission Egress Point Base Elevation [ft]: **764**
Release Height [ft]:
Plume Temperature [° F]:
Area of Emissions [sq ft]:

19. Associated emissions egress point: (continued)

Emissions Egress Point ID: 37FAN .B8

Emissions Egress Point Type: **Vertical**
Geographical Preference: **Lat/Long**
UTM Zone: **17**
UTM Vertical: **4,452.67**
UTM Horizontal: **426.71**
Longitude: **81**
Longitude: **51**
Longitude: **42**
Latitude: **40**
Latitude: **14**
Latitude: **51**
Continuous Emissions Recorder? (Y/N):
GEP Building Height [ft]:
GEP Building Length [ft]:
GEP Building Width [ft]:

Shape: **Round**
Emissions Egress Point Cross Sectional Area [sq ft]: **27**
Emissions Egress Point Height [ft]: **50.54**
Emissions Egress Point Diameter [ft]: **5.92**
Exit Gas Temperature at Maximum Operation [° F]: **70**
Exit Gas Temperature at Average Operation [° F]: **70**
Exit Gas Flow at Maximum Operation [acfm]: **54,000**
Exit Gas Flow at Average Operation [acfm]: **54,000**
Emission Egress Point Base Elevation [ft]: **765**
Release Height [ft]:
Plume Temperature [° F]:
Area of Emissions [sq ft]:

Emissions Egress Point ID: 38FAN .B8

Emissions Egress Point Type: **Vertical**
Geographical Preference: **Lat/Long**
UTM Zone: **17**
UTM Vertical: **4,452.67**
UTM Horizontal: **426.71**
Longitude: **81**
Longitude: **51**
Longitude: **42**
Latitude: **40**
Latitude: **14**
Latitude: **51**
Continuous Emissions Recorder? (Y/N):
GEP Building Height [ft]:
GEP Building Length [ft]:
GEP Building Width [ft]:

Shape: **Round**
Emissions Egress Point Cross Sectional Area [sq ft]: **27**
Emissions Egress Point Height [ft]: **62.36**
Emissions Egress Point Diameter [ft]: **5.92**
Exit Gas Temperature at Maximum Operation [° F]: **70**
Exit Gas Temperature at Average Operation [° F]: **70**
Exit Gas Flow at Maximum Operation [acfm]: **54,000**
Exit Gas Flow at Average Operation [acfm]: **54,000**
Emission Egress Point Base Elevation [ft]: **765**
Release Height [ft]:
Plume Temperature [° F]:
Area of Emissions [sq ft]:

Confidential Claims

20. Complete the table below:

Confidential item:

Basis for confidentiality claim:

State of Ohio Environmental Protection Agency

Facility Name: **Clow Water Systems Company**
Facility ID: **06-16-01-0006**
Title: **2003-P020**

Emissions Reporting Form: Emissions Unit Information

General Information

1. Emissions form(s): ☒ **Emissions fee report** ☐ Emissions statement ☒ **Emissions inventory**

2. Reporting period: **2003**

3. OEPA ID(s): **ANNEALING OVEN (P020)**

4. Annual operating hours: **2,300**

SCC Information

5. Select an SCC ID and complete the table below:

SCC ID: **3-04-003-05**

User Description for SCC (optional):

SCC operating rate units: **Tons Processed**

SCC Annual Operating Rate [SCC Units]: **150,583.00000**

Ash [%]:

Maximum Hourly Operating Rate [SCC Units]: **85.000**

Sulfur [%]:

SCC Comments:

6. Emissions information:

SCC ID: **3-04-003-05** Pollutant ID: **Ammonia**

Emissions Method Description: **Other**

Overall Efficiency Method: **Not applicable**

Auto-calculate Emissions? (Y/N): **No**

Emissions Factor:

Emissions Factor Units:

Primary Control Equipment Description: **No Control Method**

Year Installed (Primary):

Factor Controlled? (Y/N):

Secondary Control Equipment Description: **No Control Method**

Emissions Factor Operating Rate:

Year Installed (Secondary):

Control System Capture Efficiency:

Emissions Factor Operating Rate Units:

Control Device Efficiency:

Overall Device Efficiency: **0.00**

Annual Adjustment Factor: **0.00**

Emissions [tons/yr]: **0.36**

Supporting Emissions Calculation Data:

See "FER 2003 calcs.xls".

6. Emissions information: (continued)

SCC ID: **3-04-003-05** Pollutant ID: **Carbon monoxide**

Emissions Method Description: **Other**

Auto-calculate Emissions? (Y/N): **No**

Primary Control Equipment Description: **No Control Method**

Year Installed (Primary):

Secondary Control Equipment Description: **No Control Method**

Year Installed (Secondary):

Control System Capture Efficiency:

Control Device Efficiency:

Overall Device Efficiency: **0.00**

Annual Adjustment Factor: **0.00**

Overall Efficiency Method: **Not applicable**

Emissions Factor:

Emissions Factor Units:

Factor Controlled? (Y/N):

Emissions Factor Operating Rate:

Emissions Factor Operating Rate Units:

Emissions [tons/yr]: **9.34**

Supporting Emissions Calculation Data:

See "FER 2003 calcs.xls".

SCC ID: **3-04-003-05** Pollutant ID: **Nitrogen oxides**

Emissions Method Description: **Other**

Auto-calculate Emissions? (Y/N): **No**

Primary Control Equipment Description: **No Control Method**

Year Installed (Primary):

Secondary Control Equipment Description: **No Control Method**

Year Installed (Secondary):

Control System Capture Efficiency:

Control Device Efficiency:

Overall Device Efficiency: **0.00**

Annual Adjustment Factor: **0.00**

Overall Efficiency Method: **Not applicable**

Emissions Factor:

Emissions Factor Units:

Factor Controlled? (Y/N):

Emissions Factor Operating Rate:

Emissions Factor Operating Rate Units:

Emissions [tons/yr]: **11.12**

Supporting Emissions Calculation Data:

See "FER 2003 calcs.xls".

6. Emissions information: (continued)

SCC ID: **3-04-003-05** Pollutant ID: **Organic compounds**

Emissions Method Description: **Other**

Auto-calculate Emissions? (Y/N): **No**

Primary Control Equipment Description: **No Control Method**

Year Installed (Primary):

Secondary Control Equipment Description: **No Control Method**

Year Installed (Secondary):

Control System Capture Efficiency:

Control Device Efficiency:

Overall Device Efficiency: **0.00**

Annual Adjustment Factor: **0.00**

Overall Efficiency Method: **Not applicable**

Emissions Factor:

Emissions Factor Units:

Factor Controlled? (Y/N):

Emissions Factor Operating Rate:

Emissions Factor Operating Rate Units:

Emissions [tons/yr]: **1.22**

Supporting Emissions Calculation Data:

See "FER 2003 calcs.xls".

SCC ID: **3-04-003-05** Pollutant ID: **PM =< 10 microns**

Emissions Method Description: **Other**

Auto-calculate Emissions? (Y/N): **No**

Primary Control Equipment Description: **No Control Method**

Year Installed (Primary):

Secondary Control Equipment Description: **No Control Method**

Year Installed (Secondary):

Control System Capture Efficiency:

Control Device Efficiency:

Overall Device Efficiency: **0.00**

Annual Adjustment Factor: **0.00**

Overall Efficiency Method: **Not applicable**

Emissions Factor:

Emissions Factor Units:

Factor Controlled? (Y/N):

Emissions Factor Operating Rate:

Emissions Factor Operating Rate Units:

Emissions [tons/yr]: **0.85**

Supporting Emissions Calculation Data:

See "FER 2003 calcs.xls".

6. Emissions information: (continued)

SCC ID: **3-04-003-05** Pollutant ID: **PM =< 2.5 microns**

Emissions Method Description: **Other**

Auto-calculate Emissions? (Y/N): **No**

Primary Control Equipment Description: **No Control Method**

Year Installed (Primary):

Secondary Control Equipment Description: **No Control Method**

Year Installed (Secondary):

Control System Capture Efficiency:

Control Device Efficiency:

Overall Device Efficiency: **0.00**

Annual Adjustment Factor: **0.00**

Supporting Emissions Calculation Data:

See "FER 2003 calcs.xls".

Overall Efficiency Method: **Not applicable**

Emissions Factor:

Emissions Factor Units:

Factor Controlled? (Y/N):

Emissions Factor Operating Rate:

Emissions Factor Operating Rate Units:

Emissions [tons/yr]: **0.85**

SCC ID: **3-04-003-05** Pollutant ID: **Lead**

Emissions Method Description: **Other**

Auto-calculate Emissions? (Y/N): **No**

Primary Control Equipment Description: **No Control Method**

Year Installed (Primary):

Secondary Control Equipment Description: **No Control Method**

Year Installed (Secondary):

Control System Capture Efficiency:

Control Device Efficiency:

Overall Device Efficiency: **0.00**

Annual Adjustment Factor: **0.00**

Supporting Emissions Calculation Data:

Overall Efficiency Method: **Not applicable**

Emissions Factor:

Emissions Factor Units:

Factor Controlled? (Y/N):

Emissions Factor Operating Rate:

Emissions Factor Operating Rate Units:

Emissions [tons/yr]: **0.00**

6. Emissions information: (continued)

SCC ID: **3-04-003-05** Pollutant ID: **Particulate Matter**

Emissions Method Description: **Other**

Auto-calculate Emissions? (Y/N): **No**

Primary Control Equipment Description: **No Control Method**

Year Installed (Primary):

Secondary Control Equipment Description: **No Control Method**

Year Installed (Secondary):

Control System Capture Efficiency:

Control Device Efficiency:

Overall Device Efficiency: **0.00**

Annual Adjustment Factor: **0.00**

Overall Efficiency Method: **Not applicable**

Emissions Factor:

Emissions Factor Units:

Factor Controlled? (Y/N):

Emissions Factor Operating Rate:

Emissions Factor Operating Rate Units:

Emissions [tons/yr]: **0.85**

Supporting Emissions Calculation Data:

See "FER 2003 calcs.xls".

SCC ID: **3-04-003-05** Pollutant ID: **Sulfur dioxide**

Emissions Method Description: **Other**

Auto-calculate Emissions? (Y/N): **No**

Primary Control Equipment Description: **No Control Method**

Year Installed (Primary):

Secondary Control Equipment Description: **No Control Method**

Year Installed (Secondary):

Control System Capture Efficiency:

Control Device Efficiency:

Overall Device Efficiency: **0.00**

Annual Adjustment Factor: **0.00**

Overall Efficiency Method: **Not applicable**

Emissions Factor:

Emissions Factor Units:

Factor Controlled? (Y/N):

Emissions Factor Operating Rate:

Emissions Factor Operating Rate Units:

Emissions [tons/yr]: **0.07**

Supporting Emissions Calculation Data:

See "FER 2003 calcs.xls".

6. Emissions information: (continued)

SCC ID: **3-04-003-05** Pollutant ID: **Volatile organic compounds**

Emissions Method Description: **Other**

Overall Efficiency Method: **Not applicable**

Auto-calculate Emissions? (Y/N): **No**

Primary Control Equipment Description: **No Control Method**

Year Installed (Primary):

Secondary Control Equipment Description: **No Control Method**

Year Installed (Secondary):

Control System Capture Efficiency:

Control Device Efficiency:

Overall Device Efficiency: **0.00**

Annual Adjustment Factor: **0.00**

Emissions Factor:

Emissions Factor Units:

Factor Controlled? (Y/N):

Emissions Factor Operating Rate:

Emissions Factor Operating Rate Units:

Emissions [tons/yr]: **0.61**

Supporting Emissions Calculation Data:

See "FER 2003 calcs.xls".

7. Summary for all SCC IDs:

SCC ID	PART	SO2	NOx	CO	OC	VOC	Hg	Pb	As	Bz
3-04-003-05	0.85	0.07	11.12	9.34	1.22	0.61	0	0	0	0
Totals:	0.85	0.07	11.12	9.34	1.22	0.61	0	0	0	0

Schedule

8. Boiler design capacity/heat input: **0.00** (MMBtu/hr)

9. Space heat: **0.00** (%)

10. Annual throughput:

December - February: **25.00** (%)

March - May: **25.00** (%)

June - August: **25.00** (%)

September - November: **25.00** (%)

11. Normal operating schedule

Hours/day: **9**

Days/week: **5**

Weeks/year: **50**

12. Peak ozone season daily emissions rate:

VOC: **3.320** (lbs/day)

NOx: **60.430** (lbs/day)

☒ **Autocalculated**

Inventory

13. Construction date: **6/77**

14. Modification date: **6/90**

15. Shutdown date:

16. Emissions unit comments (optional):

7. Federally-enforceable operating restrictions:

Point Information

18. Emissions point centroid location:

○ UTM	Zone	Vertical	Horizontal	● Lat/Long		Degrees	Minutes	Seconds
	17	4452.73	426.71		Latitude:	40	14	53
					Longitude:	81	51	42

19. Associated emissions egress point:

Emissions Egress Point ID: **12P020.B6**

Emissions Egress Point Type: **Vertical**
Geographical Preference: **Lat/Long**
UTM Zone: **17**
UTM Vertical: **4,452.73**
UTM Horizontal: **426.71**
Longitude: **81**
Longitude: **51**
Longitude: **42**
Latitude: **40**
Latitude: **14**
Latitude: **53**
Continuous Emissions Recorder? (Y/N):
GEP Building Height [ft]:
GEP Building Length [ft]:
GEP Building Width [ft]:

Shape: **Round**
Emissions Egress Point Cross Sectional Area [sq ft]: **7**
Emissions Egress Point Height [ft]: **46.00**
Emissions Egress Point Diameter [ft]: **3.00**
Exit Gas Temperature at Maximum Operation [° F]: **1,650**
Exit Gas Temperature at Average Operation [° F]: **1,650**
Exit Gas Flow at Maximum Operation [acfm]: **1,000**
Exit Gas Flow at Average Operation [acfm]: **883**
Emission Egress Point Base Elevation [ft]: **764**
Release Height [ft]:
Plume Temperature [° F]:
Area of Emissions [sq ft]:

Confidential Claims

20. Complete the table below:

Confidential item:

Basis for confidentiality claim:

State of Ohio Environmental Protection Agency

Facility Name: **Clow Water Systems Company**
Facility ID: **06-16-01-0006**
Title: **2003-P901**

Emissions Reporting Form: Emissions Unit Information

General Information

1. Emissions form(s): ☒ **Emissions fee report** ☐ Emissions statement ☒ **Emissions inventory**

2. Reporting period: **2003**

3. OEPA ID(s): **CUPOLA (P901)**

4. Annual operating hours: **2,300**

SCC Information

5. Select an SCC ID and complete the table below:

SCC ID: **3-04-003-01**

User Description for SCC (optional):

SCC operating rate units: **Tons of Metal Charged**

SCC Annual Operating Rate [SCC Units]: **158,643.00000**

Ash [%]: **0.00**

Maximum Hourly Operating Rate [SCC Units]: **85.000**

Sulfur [%]: **0.00**

SCC Comments:

6. Emissions information:

SCC ID: **3-04-003-01** Pollutant ID: **Carbon monoxide**

Emissions Method Description: **Other**

Overall Efficiency Method: **Not applicable**

Auto-calculate Emissions? (Y/N): **No**

Emissions Factor:

Emissions Factor Units:

Primary Control Equipment Description: **Direct Flame Afterburner**

Year Installed (Primary): **1976**

Factor Controlled? (Y/N):

Secondary Control Equipment Description: **No Control Method**

Emissions Factor Operating Rate:

Year Installed (Secondary):

Emissions Factor Operating Rate Units:

Control System Capture Efficiency:

Control Device Efficiency:

Overall Device Efficiency: **99.00**

Annual Adjustment Factor: **0.00**

Emissions [tons/yr]: **40.45**

Supporting Emissions Calculation Data:

See "2003 FER calcs.xls".

6. Emissions information: (continued)

SCC ID: **3-04-003-01** Pollutant ID: **Nitrogen oxides**

Emissions Method Description: **Other**

Auto-calculate Emissions? (Y/N): **No**

Primary Control Equipment Description: **No Control Method**

Year Installed (Primary):

Secondary Control Equipment Description: **No Control Method**

Year Installed (Secondary):

Control System Capture Efficiency:

Control Device Efficiency:

Overall Device Efficiency: **0.00**

Annual Adjustment Factor: **0.00**

Overall Efficiency Method: **Not applicable**

Emissions Factor:

Emissions Factor Units:

Factor Controlled? (Y/N):

Emissions Factor Operating Rate:

Emissions Factor Operating Rate Units:

Emissions [tons/yr]: **36.49**

Supporting Emissions Calculation Data:

See "2003 FER calcs.xls".

SCC ID: **3-04-003-01** Pollutant ID: **Organic compounds**

Emissions Method Description: **Other**

Auto-calculate Emissions? (Y/N): **No**

Primary Control Equipment Description: **No Control Method**

Year Installed (Primary):

Secondary Control Equipment Description: **No Control Method**

Year Installed (Secondary):

Control System Capture Efficiency:

Control Device Efficiency:

Overall Device Efficiency: **0.00**

Annual Adjustment Factor: **0.00**

Overall Efficiency Method: **Not applicable**

Emissions Factor:

Emissions Factor Units:

Factor Controlled? (Y/N):

Emissions Factor Operating Rate:

Emissions Factor Operating Rate Units:

Emissions [tons/yr]: **21.42**

Supporting Emissions Calculation Data:

See "2003 FER calcs.xls".

6. Emissions information: (continued)

SCC ID: **3-04-003-01** Pollutant ID: **PM =< 10 microns**

Emissions Method Description: **Other**

Auto-calculate Emissions? (Y/N): **No**

Primary Control Equipment Description: **Wet Scrubber Low Efficiency**

Year Installed (Primary): **1976**

Secondary Control Equipment Description: **Venturi Scrubber**

Year Installed (Secondary): **1978**

Control System Capture Efficiency:

Control Device Efficiency:

Overall Device Efficiency: **99.00**

Annual Adjustment Factor: **0.00**

Supporting Emissions Calculation Data:

See "2003 FER calcs.xls".

Overall Efficiency Method: **Estimated**

Emissions Factor:

Emissions Factor Units:

Factor Controlled? (Y/N):

Emissions Factor Operating Rate:

Emissions Factor Operating Rate Units:

Emissions [tons/yr]: **14.79**

SCC ID: **3-04-003-01** Pollutant ID: **PM =< 2.5 microns**

Emissions Method Description: **Other**

Auto-calculate Emissions? (Y/N): **No**

Primary Control Equipment Description: **Wet Scrubber Low Efficiency**

Year Installed (Primary): **1976**

Secondary Control Equipment Description: **Venturi Scrubber**

Year Installed (Secondary): **1978**

Control System Capture Efficiency:

Control Device Efficiency:

Overall Device Efficiency: **99.00**

Annual Adjustment Factor: **0.00**

Supporting Emissions Calculation Data:

See "2003 FER calcs.xls".

Overall Efficiency Method: **Estimated**

Emissions Factor:

Emissions Factor Units:

Factor Controlled? (Y/N):

Emissions Factor Operating Rate:

Emissions Factor Operating Rate Units:

Emissions [tons/yr]: **13.84**

6. Emissions information: (continued)

SCC ID: **3-04-003-01** Pollutant ID: **Lead**

Emissions Method Description: **Other**

Auto-calculate Emissions? (Y/N): **No**

Primary Control Equipment Description: **Wet Scrubber Low Efficiency**

Year Installed (Primary): **1976**

Secondary Control Equipment Description: **No Control Method**

Year Installed (Secondary):

Control System Capture Efficiency:

Control Device Efficiency:

Overall Device Efficiency: **99.00**

Annual Adjustment Factor: **0.00**

Supporting Emissions Calculation Data:

See "2003 FER calcs.xls".

Overall Efficiency Method: **Estimated**

Emissions Factor:

Emissions Factor Units:

Factor Controlled? (Y/N):

Emissions Factor Operating Rate:

Emissions Factor Operating Rate Units:

Emissions [tons/yr]: **0.03**

SCC ID: **3-04-003-01** Pollutant ID: **Particulate Matter**

Emissions Method Description: **Other**

Auto-calculate Emissions? (Y/N): **No**

Primary Control Equipment Description: **Wet Scrubber Low Efficiency**

Year Installed (Primary): **1976**

Secondary Control Equipment Description: **Venturi Scrubber**

Year Installed (Secondary): **1978**

Control System Capture Efficiency:

Control Device Efficiency:

Overall Device Efficiency: **99.00**

Annual Adjustment Factor: **0.00**

Supporting Emissions Calculation Data:

See "2003 FER calcs.xls".

Overall Efficiency Method: **Estimated**

Emissions Factor:

Emissions Factor Units:

Factor Controlled? (Y/N):

Emissions Factor Operating Rate:

Emissions Factor Operating Rate Units:

Emissions [tons/yr]: **19.04**

6. Emissions information: (continued)

SCC ID: **3-04-003-01** Pollutant ID: **Sulfur dioxide**

Emissions Method Description: **Other**

Auto-calculate Emissions? (Y/N): **No**

Primary Control Equipment Description: **Alkaline Fly Ash Scrubbing**

Year Installed (Primary): **1976**

Secondary Control Equipment Description: **No Control Method**

Year Installed (Secondary):

Control System Capture Efficiency:

Control Device Efficiency:

Overall Device Efficiency: **50.00**

Annual Adjustment Factor: **0.00**

Supporting Emissions Calculation Data:

See "2003 FER calcs.xls".

Overall Efficiency Method: **Not applicable**

Emissions Factor:

Emissions Factor Units:

Factor Controlled? (Y/N):

Emissions Factor Operating Rate:

Emissions Factor Operating Rate Units:

Emissions [tons/yr]: **4.76**

SCC ID: **3-04-003-01** Pollutant ID: **Volatile organic compounds**

Emissions Method Description: **Other**

Auto-calculate Emissions? (Y/N): **No**

Primary Control Equipment Description: **No Control Method**

Year Installed (Primary):

Secondary Control Equipment Description: **No Control Method**

Year Installed (Secondary):

Control System Capture Efficiency:

Control Device Efficiency:

Overall Device Efficiency: **0.00**

Annual Adjustment Factor: **0.00**

Supporting Emissions Calculation Data:

See "2003 FER calcs.xls".

Overall Efficiency Method: **Not applicable**

Emissions Factor:

Emissions Factor Units:

Factor Controlled? (Y/N):

Emissions Factor Operating Rate:

Emissions Factor Operating Rate Units:

Emissions [tons/yr]: **21.42**

7. Summary for all SCC IDs:

SCC ID	PART	SO2	NOx	CO	OC	VOC	Hg	Pb	As	Bz
3-04-003-01	19.04	4.76	36.49	40.45	21.42	21.42	0	0.03	0	0
Totals:	19.04	4.76	36.49	40.45	21.42	21.42	0	0.03	0	0

Schedule

8. Boiler design capacity/heat input: **0.00** (MMBtu/hr)

9. Space heat: **0.00** (%)

10. Annual throughput:

December - February: **25.00** (%)
March - May: **25.00** (%)
June - August: **25.00** (%)
September - November: **25.00** (%)

11. Normal operating schedule

Hours/day: **9**
Days/week: **5**
Weeks/year: **50**

12. Peak ozone season daily emissions rate:

VOC: **116.410** (lbs/day)
NOx: **198.320** (lbs/day)
☒ **Autocalculated**

Inventory

13. Construction date: **6/84**

14. Modification date: **6/84**

15. Shutdown date:

16. Emissions unit comments (optional):

17. Federally-enforceable operating restrictions:

Point Information

18. Emissions point centroid location:

○ UTM	Zone	Vertical	Horizontal	● Lat/Long		Degrees	Minutes	Seconds
	17	4452.67	426.78		Latitude:	40	14	51
					Longitude:	81	51	39

19. Associated emissions egress point:

Emissions Egress Point ID: **01P901.B6**

Emissions Egress Point Type: **Vertical**
Geographical Preference: **Lat/Long**
UTM Zone: **17**
UTM Vertical: **4,452.67**
UTM Horizontal: **426.78**
Longitude: **81**
Longitude: **51**
Longitude: **39**
Latitude: **40**
Latitude: **14**
Latitude: **51**
Continuous Emissions Recorder? (Y/N): **No**
GEP Building Height [ft]: **24.00**
GEP Building Length [ft]: **15.00**
GEP Building Width [ft]: **15.00**

Shape: **Round**
Emissions Egress Point Cross Sectional Area [sq ft]: **12**
Emissions Egress Point Height [ft]: **40.00**
Emissions Egress Point Diameter [ft]: **4.00**
Exit Gas Temperature at Maximum Operation [° F]: **200**
Exit Gas Temperature at Average Operation [° F]: **187**
Exit Gas Flow at Maximum Operation [acfm]: **72,000**
Exit Gas Flow at Average Operation [acfm]: **53,779**
Emission Egress Point Base Elevation [ft]: **792**
Release Height [ft]:
Plume Temperature [° F]:
Area of Emissions [sq ft]:

19. Associated emissions egress point: (continued)

Emissions Egress Point ID: **E-CUPOLA**

Emissions Egress Point Type: **Fugitive**
Geographical Preference: **Lat/Long**
UTM Zone: **17**
UTM Vertical: **4,452.67**
UTM Horizontal: **426.78**
Longitude: **81**
Longitude: **51**
Longitude: **39**
Latitude: **40**
Latitude: **14**
Latitude: **51**
Continuous Emissions Recorder? (Y/N):
GEP Building Height [ft]:
GEP Building Length [ft]:
GEP Building Width [ft]:

Shape:
Emissions Egress Point Cross Sectional Area [sq ft]:
Emissions Egress Point Height [ft]:
Emissions Egress Point Diameter [ft]:
Exit Gas Temperature at Maximum Operation [° F]:
Exit Gas Temperature at Average Operation [° F]:
Exit Gas Flow at Maximum Operation [acfm]:
Exit Gas Flow at Average Operation [acfm]:
Emission Egress Point Base Elevation [ft]:
Release Height [ft]: **53.50**
Plume Temperature [° F]: **200**
Area of Emissions [sq ft]: **396.00**

Confidential Claims

20. Complete the table below:

Confidential item:

Basis for confidentiality claim: